



中國水務集團有限公司 環境、社會及管治報告

CHINA WATER AFFAIRS GROUP LIMITED
ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

2017
ESG報告



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CHINA WATER

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報告概況

Report Overview

MANAGEMENT'S STATEMENT

Dear Readers,

We would like to express our sincere gratitude for your concern regarding China Water Affairs Group Limited (the "Company") and its subsidiaries and associates (hereinafter referred to as the "Group" or "China Water"). This is the first published environment, social and governance report of the Group. The report systematically sets out the Group's policies and effectiveness in areas of environment and society in 2017. We would like our readers to know, from all angles, our efforts made in areas of environment, social and governance and give advice and recommendations to our related work.

The year 2017 was a year of rapid, sustained and positive development of the Group, as well as a year of coordination between corporate profitability, environment protection and social benefits. Adhering to the fundamental principles of respecting and safeguarding the interest of stakeholders, we endeavour to fulfil our environmental protection and social development responsibilities while enhancing customer service, value creation and reasonable pursuit of corporate interest so as to achieve sustainable development of the enterprise.

While focusing on our principal businesses, we continue to expand our markets. Fully capitalising on our technical and management strengths in water supply, sewage treatment and related construction projects, we strive to provide quality products and services to more users in cities and their surrounding rural areas. In response to the key policies of the PRC government to promote urban infrastructure construction, we widely engage in PPP projects and endeavour to strengthen water related principal businesses. At the same time, we further extend the water related industry chain to set foot in the urban water environment management and urban drainage entrusted operations.

Upholding the core values of "Water-oriented, Kindness to Society", we strive to develop ourselves into a "large-scale conglomerate that provides the highest quality services at its best endeavours". In the course of development, we are deeply aware that an enterprise not only needs to create value and wealth but also has to reach out to fulfil its responsibilities as an enterprise legal person in areas of environmental protection and harmonious social development through organising corporate events.

In the course of development, we continue to improve and optimise our environment and social policies and systems. In 2011, we established the environment and social management system (the “ESMS”) which sets out the identification, assessment and preventive measures of environment and social risks for its subsidiaries in the process of project investment, construction and operation to avoid and minimise the potential adverse effects of the projects. We please the users, government authorities, employees, shareholders and stakeholders through responsible actions.

Looking into 2018, opportunities are greater than challenges. The water market in China remains fast growing with very weak city water infrastructure investment and management. In addition, as urbanisation in China accelerates, there will be an increasing demand for quality water supply products and nice water environment. There is still tremendous room for development in the water market in China. Given our judgement and confidence in water supply development, we will unswervingly implement the expansion strategy and optimise the resource allocation. Taking advantage of the current trends, on the premise of strengthening environmental protection and promoting social development, we will actively compete with the peers in the water market in China in an effort to provide more users with quality water products and services so as to create greater corporate value.

Duan Chuan Liang
Chairman of the Board

OVERVIEW OF CORPORATE DEVELOPMENT

CORPORATE INFORMATION

China Water Affairs Group Limited was previously incorporated in the Cayman Islands as an exempted company. Pursuant to the extraordinary general meeting held on 9 June 2003, the place of registration of the Company has been re-domiciled from the Cayman Islands to Bermuda.

The Company is a company listed on the Main Board of the Hong Kong Stock Exchange (stock code: HK0855) and is a tradable stock under the Shenzhen-Hong Kong Stock Connect.

CORPORATE HEADQUARTERS

The headquarters of the Group is located at Suite 6408, 64th Floor, Central Plaza, 18 Harbour Road, Wanchai, Hong Kong.

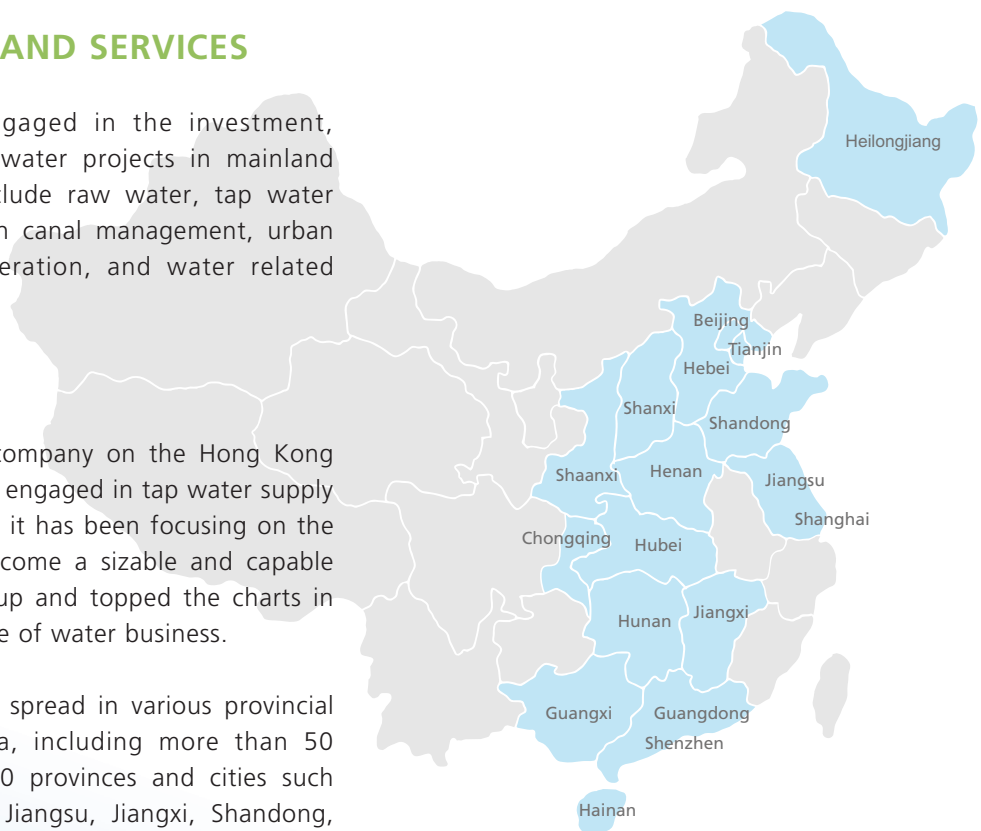
PRINCIPAL PRODUCTS AND SERVICES

China Water is principally engaged in the investment, construction and operation of water projects in mainland China. Its principal projects include raw water, tap water supply, sewage treatment, urban canal management, urban drainage management and operation, and water related construction projects.

SERVICE MARKETS

China Water is the only listed company on the Hong Kong equity market which is principally engaged in tap water supply business. Since its establishment, it has been focusing on the water business and has now become a sizable and capable integrated large-scale water group and topped the charts in China in terms of the overall scale of water business.

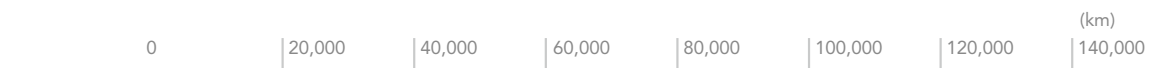
The Group's businesses are well spread in various provincial cities and regions across China, including more than 50 counties and districts in over 20 provinces and cities such as Hebei, Shanxi, Heilongjiang, Jiangsu, Jiangxi, Shandong, Henan, Guangdong, Guangxi, Hubei, Hunan, Hainan, Shaanxi, Beijing, Tianjin, Chongqing, Shanghai and Shenzhen.



SCALE OF THE GROUP

As at 31 March 2017, China Water had a daily designed water supply capacity of 7.03 million m³, sewage processing capacity of 0.81 million m³, water pipelines under operation, maintenance and management of approximately 130,000 km and drainage pipelines under entrusted operation of approximately 3,700 km. The Group had approximately 2.90 million users of water service (number of registered water metres) comprising approximately 2.60 million domestic users and approximately 300,000 commercial and industrial users.

As at 31 March 2017



2017 MAJOR ACHIEVEMENTS

During the reporting period, major achievements included (i) acquisition of major water projects amounting to HK\$170 million; (ii) new large-scale construction and upgrade projects amounting to HK\$2,030 million; and (iii) completion of the Group's financing amounting to HK\$6,900 million.

EMPLOYEES

China Water follow strictly the Labour Law of the People’s Republic of China. To safeguard the interest of employees, we enter into the Labour Contract with approximately 7,100 employees. Employment conditions such as recruitment, remuneration and benefits that relate to the employees’ interest are determined by way of negotiation organised by the Group and its subsidiaries with the corresponding level of labour union.

AWARDS GRANTED TO SOME OF THE GROUP’S SUBSIDIARIES OVER THE PAST THREE YEARS

Jingzhou Water Affairs Group Co., Ltd. (荊州水務集團有限公司) was named the National Civilised Unit (全國文明單位)



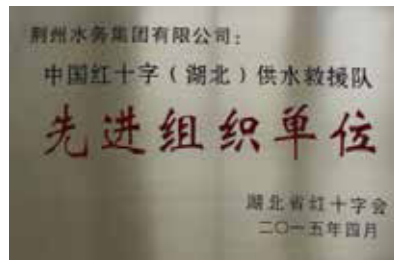
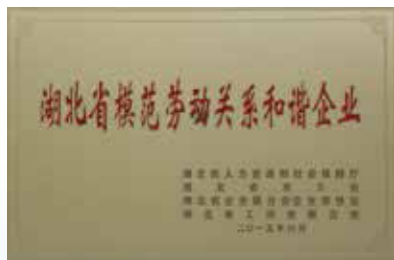
Jingzhou Water Affairs Group Co., Ltd. (荊州水務集團有限公司) was named Model Enterprise of Harmonious Labour Relations in Hubei Province (湖北省模範勞動關係和諧企業)

Jingzhou Water Affairs Group Co., Ltd. (荊州水務集團有限公司) was named the Water Supply Rescue Team Advanced Organisational Unit by The Red Cross Society of China (Hubei)

Chongqing Yongchuan Qiaoli Water Co., Ltd. (重慶市永川區僑立水務有限公司) was named the Grade AAA Enterprise of Harmonious Labour Relations in Chongqing (重慶市和諧勞動關係AAA級企業)

Chongqing Yongchuan Qiaoli Water Co., Ltd. (重慶市永川區僑立水務有限公司) was named the Consumer Rights Protection and Integrity Unit (消費維權誠信單位)

Xinyu Water Affairs Group Co., Ltd. was named the Enterprise of Harmonious Labour Relations in Jiangxi (江西省勞動關係和諧企業)



MATERIALITY ANALYSIS

The determination and analysis of materiality topics are conducted by three processes, namely, identification, order and verification

IDENTIFICATION

We have taken into account the topics stated in the materiality list in G4 Sustainability Reporting Guidelines (“G4 Guidelines”) issued by Global Reporting Initiative (“GRI”), the indicator related topics required to be disclosed by the Environmental, Social and Governance Reporting Guide in Appendix 27 to the Main Board Listing Rules of the Hong Kong Stock Exchange, and the materiality topics highlighted in the course of stakeholder engagement. China Water has identified 19 materiality topics and determined the scope and boundary of the impacts of such topics.

No.	Topic	Materiality aspects	Scope of impact						Boundary
			Internal	External					
				Creditors	Government authorities	Customers/ consumers	Suppliers	Community	
1	Sound Operational Management	Governance measures	●	●	●	■	●	●	Materiality aspects applicable to China Water and its subsidiaries and associated companies
2		Organisational structure	●	●	●	■	●	●	
3		Economic performance	●	●	■	■	■	■	
4		Compliant operation	●	●	●	■	●	■	
5	Ongoing Environmental Optimisation	Emissions	●	■	●	●	■	●	
6		Energy saving and consumption reduction	●	■	●	■	■	■	
7		Environmental protection	●	■	●	●	■	●	
8	Social Co-Development	Employment	●	■	●	■	■	■	
9		Remuneration and benefits	●	■	■	■	■	■	
10		Development and training	●	■	■	■	■	■	
11		Health and safety	●	■	●	■	■	■	
12		Labour standards	●	■	●	■	■	■	
13		Supply chain management	●	■	●	■	●	■	
14		Procurement behaviours	●	■	●	■	●	■	
15		Anti-corruption	●	■	●	■	●	■	
16		Product quality	●	■	●	●	■	■	
17		Customer confidentiality	●	■	●	●	■	■	
18	Community investment	●	■	■	■	■	●		
19	Charity and relief	●	■	■	■	■	●		

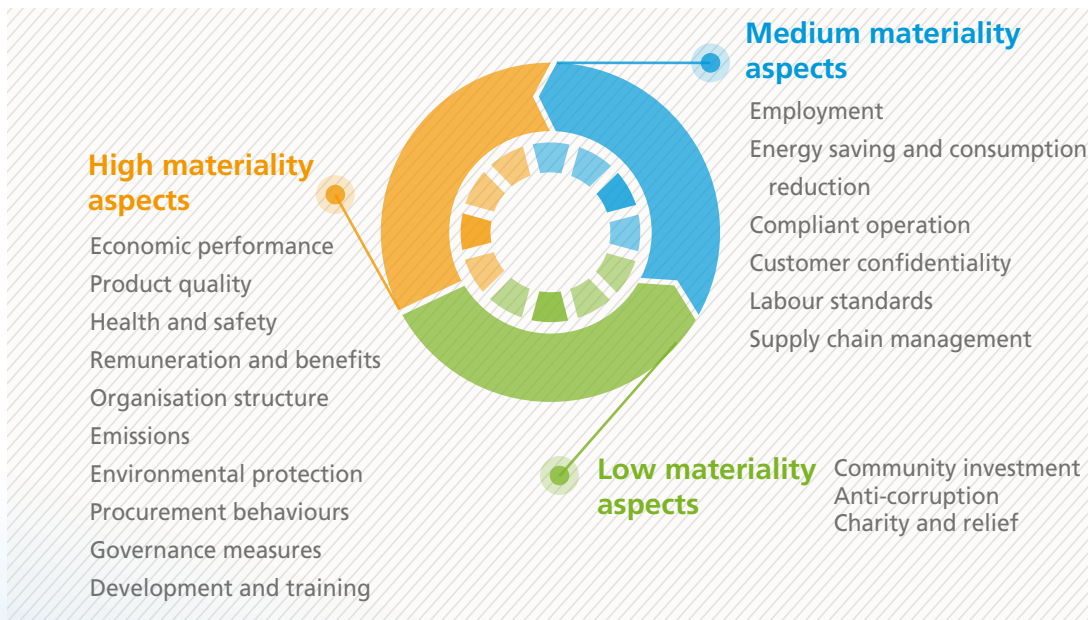
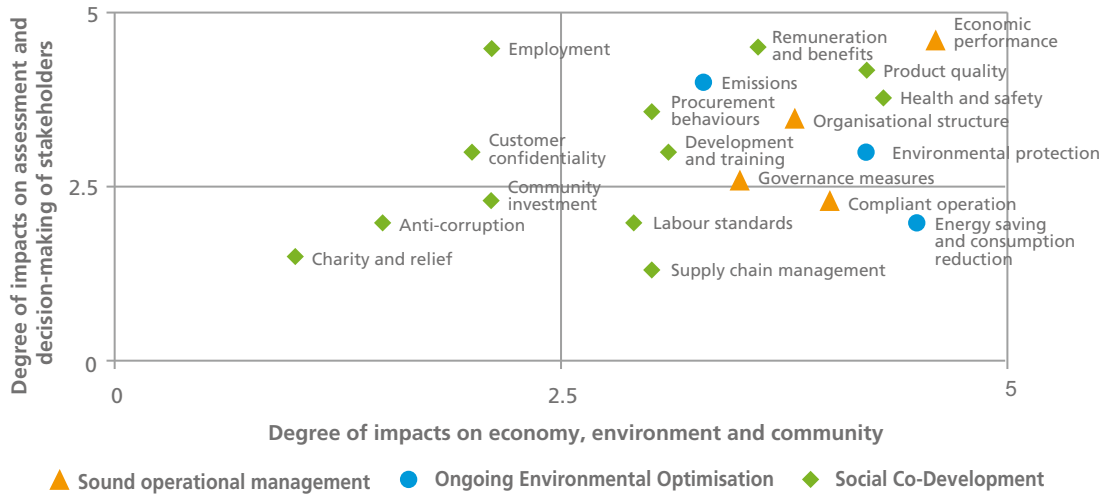
● Refers to greater impacts of materiality aspects on stakeholders

■ Refers to less impacts of materiality aspects on stakeholders

ORDER

With respect to the selected materiality topics, we list out the sequence of importance according to the degree of impacts on the economy, environment and community and the impacts on assessment and decision-making of stakeholders.

Illustrative Diagram of Order of Materiality Aspects



VERIFICATION

In determining the materiality aspects, China Water has organised an internal expert team of 41 members to carry out verification so as to reach consensus with the Group. At the same time, the Group has formulated administrative measures regarding the indicators involved in the materiality aspects to determine the means of collection and procedures of indicator information disclosure.

STAKEHOLDER ENGAGEMENT

As an enterprise engaging in city utilities business, China Water's business activities are closely related to stakeholders. In the course of operation and management, the Group has built a comprehensive communication channel with stakeholders which is open and transparent. Attaching great importance to the requests and concerns of stakeholders, we respond and tackle them in a timely manner to form a constructive and interactive mechanism between the parties.

Stakeholders of China Water that may have material impacts in the course of operation mainly include: Interested shareholders/investors/creditors, employees, suppliers, consumers, as well as government authorities and local communities that have other relationship with the enterprise.

Means of stakeholder engagement

Stakeholders	Means of engagement and communication	Topics concerned	Frequency of engagement
Shareholders/ investors/creditors	Annual report, interim report	Economic performance Supply chain management Organisational structure Governance measures	Year-end/half-year
	Investor communication meeting		As and when necessary
	Onsite visit		As and when necessary
	Press release, announcement		Regularly
	Shareholders' meeting		Regularly/As and when necessary
Government authorities	Correspondence	Operational safety Product quality and service Compliant operation Emissions Energy saving and consumption reduction Labour standards	As and when necessary
	Onsite visit		Regularly
	Themed conference		As and when necessary
	Seminar		Regularly
	Progress report		Monthly, quarterly and annually
Suppliers	Open tender	Procurement behaviours Anti-corruption	As and when necessary
	Onsite visit		As and when necessary
	Meeting		As and when necessary
	Training activity (Product briefing)		As and when necessary
Customers/ consumers	Customer satisfaction survey	Product quality and service Consumer rights protection	Regularly
	Bringing service into the Community		Regularly
	Factory open day		Regularly
	Hearing		As and when necessary
	User seminar		Year-end/half-year
	Company homepage/ WeChat official account		Regularly

Stakeholders	Means of engagement and communication	Topics concerned	Frequency of engagement
Employees	Employee seminar	Remuneration and benefits	Year-end/half-year
	Employee (representative) meeting	Employment	Year-end/half-year
	One-on-one meeting	Development and training	As and when necessary
	Employee group activity	Work environment Health and safety Labour standards	Regularly
Local community	Factory open day	Community investment Charity and relief	Regularly
	Bringing service into the Community		Regularly
	Project environment and social survey		As and when necessary
	Public welfare and charity event		As and when necessary



Open day of Central District Water Plant of Huizhou Daya Bay Yiyuan Water Purification Co., Ltd.



Open day of Baiyuan Water Plant of Pingxiang Water Co., Ltd.



Open day of Zhongnong Water Plant of Changsha (China Water) Co., Ltd.



Hearing on urban water price reform and implementation of progressive water pricing in Heyuan



Hearing on downtown water price reform in Ji'An



Hearing on establishment of progressive water pricing for urban residents in Yongchuan, Chongqing



Seminar on water supply service social supervision held by Chongqing Yongchuan Qiaoli Water Co., Ltd.



Seminar on trade practice supervision held by Jingzhou Water Affairs Co., Ltd.



Seminar on water supply works held by Henan Silver Dragon (Xihua) Water Supply Co., Ltd and NPC deputies

SOUND OPERATIONAL MANAGEMENT

China Water endeavours to maintain sound corporate management standards and procedures and believes that a high standard of corporate governance is crucial to enhancing investors' confidence. The Board strives to improve the corporate governance system to ensure completeness, transparency and accuracy of the matters disclosed and maintain a high standard of corporate governance capability so as to facilitate value enhancement of the Group.

The Group has been in compliance with the provisions of the Corporate Governance Code as set out in Appendix 14 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited. Special circumstances are also elaborated in the section headed Corporate Governance Report in the annual report.

The Board of the Group comprises 12 directors, including four executive directors, four non-executive directors and four independent non-executive directors.

The Board is mainly responsible for formulating the corporate strategies and monitoring the Group's business performance. Board meetings are regularly held by the Group. Save as the daily operational matters that are subject to the decision of the management, the majority of the resolutions are passed by the Board.

The Board has set up three board committees namely the Audit Committee, Nomination Committee and Remuneration Committee. The Audit Committee is mainly responsible for reviewing the accounting policies of the Group and monitoring the financial reporting procedures of the Group; monitoring the performance of the internal and external auditors; reviewing and verifying the effectiveness of the Group's risk management and internal control measures; and ensuring compliance with applicable laws and regulations and regulatory requirements.

The Nomination Committee is responsible for identifying qualified candidates for the Board, nominating talent professionals and quality individuals to join the Group, safeguarding a strong and diverse Board, and making recommendations to the Board on relevant matters relating to the appointment or re-appointment of directors if necessary.

The Remuneration Committee is responsible for making recommendations to the Board on the remuneration packages of directors and senior management, with reference to directors' and senior management's duties, responsibilities and performance and the results of the Group.

For details of corporate governance, please refer to the relevant contents disclosed in the annual report of the Group.

ONGOING ENVIRONMENTAL OPTIMISATION

China Water has been focusing on the water market in China specialising in the investment, construction and operation of water projects, and has rapidly developed itself into one of the largest integrated water operators of raw water, tap water, water conservancy projects, sewage treatment and related value-added services in China.

The Group strives to maximise the environment and social benefits and avoid or minimise (if unavoidable) the adverse impacts of its investment, construction and operational projects on the environment. Based on its business positioning, the Group works toward co-existence and co-prosperity with the environment and the community with a view to achieving mutual improvement.

CHINA WATER IS ENGAGED IN CLEAN AND GREEN BUSINESS

Natural purified water



Raw water and tap water

940 million m³

During the year, purified raw water and tap water was 940 million m³, providing drinking water and water use for approximately 10 million domestic users and 2.9 million connected users in urban and rural areas.

Sewage treatment



Total sewage

250 million m³

During the year, total sewage treatment capacity was 250 million m³; COD, BOD, SS and NH emission reduction were 53,073 tonnes, 25,997 tonnes, 36,551 tonnes and 4,753 tonnes, respectively.

CITY ENVIRONMENT BEAUTIFICATION

During the reporting period, China Water's investment for infrastructure relating to city water processing plants, sewage treatment plants, city water supply and sewage pipelines amounted to approximately HK\$2,030 million and the major acquisition of water projects made was approximately HK\$170 million. It had additional water processing capacity of 800,000 m³/day, additional sewage treatment capacity of 55,000 m³/day and built a garden water plant.

Pleasant view of the water processing plant



No. 4 Water Plant of Xinyu Water Affairs Group Co., Ltd.

China Water issued the *Standards on Operation and Management of Water Plants* 《製水廠運營管理標準》 in 2015 pursuant to the water related laws and regulations, industry standards and practices as well as more than 10 years of management experience, setting out the internal standards in seven areas including water quality, water pressure, purified water process, equipment, automation and informatisation, production safety and onsite management. Through ongoing assessment, comparison, inspection and rationalisation, the management level and technology capabilities of its 88 water plants and 22 sewage treatment plants have been optimised. The outlook of the plants has been revamped and thus shaping a pleasant city landscape.



Yingdou Water Plant of Jingzhou Water Affairs Co., Ltd.



Water plant of Shenzhen Grand Industrial Zone



Hongguang sewage treatment plant of Jingzhou Water Environmental Protection Co., Ltd.

The Group is responsible for the operational management of approximately 3,700 km drainage network by way of O&M in Shenzhen Grand Industrial Zone, Pingshan New District, Bao'an Area and Longhua Area.



Maintenance of drainage pipelines by Shenzhen Grand Industrial Zone Water Co., Ltd.

Capitalising on the strengths of municipal engineering construction management and technology, the Group endeavours to tap into new business areas. In particular, the Group worked with the County Government of Luyi, Henan regarding the investment and management of overall water environment in an effort to improve the outlook of water environment of the city at full scale.



Governance achievements of Wuhe in Luyi county, Henan Province



ONGOING REDUCTION OF EMISSION AND ENERGY CONSUMPTION

Emission

China Water regards emission reduction and compliance as one of the key areas in fulfilling its environmental protection responsibilities and endeavours to raise the awareness on environmental protection through publicity and guidance among its employees and reduce the impacts of emissions on the environment by strengthening technology and management tools.

China Water classifies its major emissions produced in the course of operation into the following two categories:

Category I refers to the sludge produced in the course of raw water processing. The key components of sludge are the substances that are dissolved in natural water and the water purifiers added in the course of water purification.

Category II refers to the waste gases, sludge and treated discharge. Waste gases refer to CO₂, H₂S and NH₃ produced in the course of bioprocessing; major pollutants in treated discharge are COD, SS and NH₃; and sludge mainly includes silt, garbage and excess activated sludge.

China Water has in place special standards for management of general wastes that have a smaller impact on the environment and human health, and has a comprehensive set of management processes and operational procedures regarding the identification, discharge and regulation of wastes to ensure compliance with waste emission.

With respect to the hazardous wastes produced in the industrial sewage treatment plants, qualified professional companies are engaged to deal with them.

Emission categories and emission statistics (A1.1)

Category	Emission	Type of pollutants	Total volume (tonnes)	Compliance of applicable laws and regulations	Remark
Water supply	Sludge	Naturally dissolved substances and water purifiers	109,409	<i>Environmental Protection Law of the People's Republic of China</i>	Compliant emission
Sewage treatment	Waste gases	H ₂ S	Emission below the limit	<i>Environmental Impact Assessment Law of the People's Republic of China</i>	Compliant emission
		NH ₃	Emission below the limit	<i>Water Pollution Prevention and Control Law of the People's Republic of China</i>	Compliant emission
	Treated discharge	COD	7,378	<i>Atmospheric Pollution Prevention and Control Law of the People's Republic of China</i>	Compliant emission
		SS	4,089	<i>Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste</i>	Compliant emission
		NH	1,199	<i>Ambient Air Quality Standards</i>	Compliant emission
	Sludge	Silt, garbage and excess activated sludge	129,998	<i>Environmental Quality Standards for Surface Water</i> <i>Environmental Quality Standards for Underground Water</i> <i>Emission Standards for Odour Pollutants</i> <i>Pollutants Emission Standards of Urban Sewage Water Treatment Plant</i>	Sludge from domestic sewage treatment plants is used for reclamation and electricity generation after dehydration and desiccation; and sludge from industrial sewage treatment plants is dealt with by qualified professional companies after dehydration and desiccation

Greenhouse gas emission (A1.2)

The greenhouse gases directly produced by China Water in the course of production and operation are very limited. The greenhouse gases are mainly produced from fuel combustion in production and office premises. The greenhouse gases indirectly produced are mainly caused by power consumption in the course of production. The directly and indirectly greenhouse gas emissions in terms of CO₂ equivalent (unit: tonnes) are as follows:

Category	Scope 1	Scope 2	Scope 3	Total volume
Water supply	563	218,001	N/A	218,564
Sewage treatment	8	51,935	N/A	51,943
Total	571	269,936		270,507

* The definition of Greenhouse Gas Indicator Scope is cited from UN's Kyoto Protocol and The Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard of WRI and WBCSD.

Scope 1: Refers to the direct greenhouse gas emissions where the greenhouse gas emissions are derived from sources owned or controlled by the enterprise. (Remark: including those produced in the course of production process and those produced in fuel combustion)

Scope 2: Refers to the indirect greenhouse gas emissions where the greenhouse gas emissions are derived from electricity, heat, cooling and steam purchased from other entities or used for self-combustion. (Remark: those produced from purchased electricity)

Scope 3: Refers to other indirect greenhouse gas emissions that are produced as a result of the activities of the entity but the emissions are not derived from sources owned or controlled by the enterprise. China Water has not established the means of data collection regarding the greenhouse gas emissions under scope 3. Accordingly, it is not applicable to the report.

Emission factor and global warming potential ("GWP"): Intergovernmental Panel on Climate Change ("IPCC") data are used.

The hazardous wastes produced in the course of production and operation of China Water are mainly sludge produced in the industrial sewage treatment plants. During the reporting period, total sludge produced was 13,434 tonnes (A1.3). These wastes are properly dealt with by qualified treatment companies (A1.6).

Non-hazardous wastes are mainly sludge produced in water companies and domestic sewage treatment plants. During the reporting period, total sludge produced was 225,973 tonnes (A1.4). Treated sludge, which meets with the emission standards, will be dealt with by the local environmental hygiene departments after dehydration and desiccation. Major processing methods include reclamation, compost or combustion for electricity generation (A1.6).



Energy saving and consumption reduction (A1.5)

Energy saving and consumption reduction is a key segment in the operational management of the Group. China Water promotes the new process, new technology and new initiatives of energy saving and consumption reduction through strengthening internal publicity and training on energy saving and consumption reduction; and improves the resource utilisation management model to reduce the consumption of supplies in the course of production of the units and to enhance resource utilisation rate.



Energy
consumption
percentage
21.2%

The Group's energy consumption as a percentage of the cost of production for the principal business was significant. During the reporting period, energy consumption percentage for the water supply business was 21.2% and 33.8% for the sewage treatment business. The reduction in energy consumption not only is an external need for environmental protection but also an internal requirement of the enterprise's internal management. It is crucial to enhancing the efficiency of the enterprise.

We take energy saving and consumption reduction as a fundamental management task of the enterprise, which will be applied across the enterprise in the course of production, operation and management

We take a prudent approach regarding the site selection of water plants

Upon site selection of water plants, we prioritise sites that enable gravity flow water distribution. For our Pingxiang Baiyuan Water Plant, Luxi Zhushan Water Plant, Gao'an Cunqian Water Plant, Heyuan Qingshan Water Plant and Yuncheng Xiaxian Fanjiayu Water Plant, the Group has made use of the geographical landscape to implement gravity flow water distribution which minimises power consumption upon water intake and water distribution. Only a small amount of electricity is used in office business, discharge and filter backwash.

We carry out process upgrade

The Group gradually carries out reconstruction or upgrade of water plants that have been operating for long years with obsolete process, and introduces a large number of new processes and energy efficient equipment. Accordingly, the overall resource consumption has shown a downward trend over the years. In recent years, new construction and renovation projects of the Group include: Changde Anxiang No. 2 Water Plant (new construction), Ningxiang Zhengnong Water Plant (renovation), Guangdong Renhua Water Plant (renovation), Chongqing Yongchuan Qiaoli No. 3 Water Plant (new construction), Jingzhou Shuiwu Liulin Water Plant (renovation), Zhoukou No. 2 Water Plant (renovation) and South-to-North Water Diversion Water Plant (new construction), Longyao Dongfang Water Plant and Xihe Water Plant (new construction), Yuncheng Beicheng Water Plant (renovation), Xinyu Fairy Lake Water Plant (new construction), Jian Hedong Water Plant (renovation), Yifeng Lianggang Water Plant (new construction), Gao'an Shahu Water Plant and Ruiyang Water Plant (new construction), Pengze No. 2 Water Plant (new construction) and Jiangxi Wannian Xiancheng Water Plant (renovation). We have also carried out renovation and upgrade of the sewage treatment plants of many companies such as Jingzhou Sewage, Yanshan Sewage, Baoji Chencang and Baoji Goldtrust. Currently, 11 out of the Group's 22 sewage treatment plants have met the national Class I Category A discharge standards.

We reduce leakage ratio and enhance water supply efficiency in order to reduce energy consumption

Through renovation of pipeline network and establishment of appraisal and incentive system to reduce leakage ratio, we strive to reduce water leakage to maximise the economic benefits of energy consumption.

We increase the use of clean energy

China Water makes use of the open space in the plants and the rooftop of the buildings for the installation of solar panels through cooperation with new energy companies. Currently, we have installed solar panels in more than 10 water plants and sewage treatment plants in Jiangxi and Hunan. During the reporting period, the Group produced clean energy of 9,090Mwh, accounting for approximately 3% of the total power consumption. Looking ahead, China Water plans to gradually increase the clean energy utilisation percentage each year. It is estimated that the utilisation rate will reach 10% by 2018, 18% by 2019 and 28% by 2020.

China Water mainly uses indirect energy. During the reporting period, details of energy use are as follows (A2.1)

Category	Power consumption (Mwh)	Unit power consumption (Kwh/'000 tonnes)	Fuel combustion (tonnes)
Water supply	277,707	251	184.8
Sewage treatment	66,159	266	2.6
Total	343,866	N/A	187.4

Total energy consumption (power consumption and fuel combustion) is equivalent to 1,250,080 GJ

China Water’s energy utilisation efficiency has revealed an increasing trend over the years. During the reporting period, power consumption of water supply plants decreased by 1.55% year-on-year; whereas unit power consumption of sewage treatment plants decreased by 1.08% year-on-year (A2.3).

During the reporting period, China Water had a total water intake of 1,149.75 million tonnes, purified raw water and tap water of 1,107.58 million tonnes and water production and consumption of 42.17 million tonnes. The percentage of water consumption of the units (water consumption of the plants) was 3.67% (A2.2).

Total water intake
1,149.75 million tonnes

Purified raw water and tap water
1,107.58 million tonnes

Water production and consumption
42.17 million tonnes

Unit water consumption percentage
3.67%

As provider of city water, China Water does not have any issue in sourcing water that is fit for purpose but is an unswervingly promoter and practitioner of water conservation and efficiency (A2.4).



Water saving campaign of Jingzhou Water Affairs Co., Ltd.



"World Water Day; China Water Week" promotion event held by Yuncheng Silver Dragon Water Affairs Co., Ltd.



"Promoting urban water saving and emission reduction to create a national landscape garden city" water saving promotion held by Heyuan Water Industry Group Development Co., Ltd.

Environment and natural resources

All construction projects of China Water do not fall under the category of construction projects that may have a material impact on the environment under the Catalogue for the Classified Administration of Environmental Protection for Construction Projects 《建設項目環境保護分類管理名錄》 issued by the State Council.

The construction of water projects has considerable impacts on the environment and natural resources. The impacts mainly refer to the small amount of wastewater, waste gases, waste residues and noise produced in the course of construction, which are limited and generally temporary. China Water follows strictly the administrative requirements to engage qualified third parties to carry out feasibility studies and assessment of environmental impacts, identify the factors of impacts that may be caused by the project on the environment and natural resources, and take practical and effective measures to avoid or minimise the impacts in the course of construction of the project (A3.1).

China Water's consumption of natural resources refers to the renewable industrial products, which are mainly the water purifiers and disinfectants added in the course of water supply and sewage treatment.

Category	Name	Dosage (t)	Unit average dosage (Kg/Km ³)
Water purifier	PAC	9,771.6	11.1
	BAC	101.2	5.4
	Al ₂ SO ₄	97.1	4.1
	NaOH	330.9	3.9
Disinfectant	Liquid chlorine	1,605.8	2.0
	ClO ₂	576.9	2.5
	NaClO	704.9	4.4

SOCIAL CO-DEVELOPMENT

As an enterprise legal person, China Water forms an integral part of the community. We consider that the relationship between corporate development and social development is organically unified, mutually supportive and mutually beneficial. An enterprise does not grow at the expense of the environment and other stakeholders.

The Group's allocation to stakeholders during the reporting period

Stakeholders	Indicator	2017 (HK\$'000)	Category
Investors/creditors	Revenue	5,707,895	Economic benefits created by the enterprise
Suppliers (products and services)	Costs and expenses	3,222,990	
Employees	Remuneration and benefit expense	613,893	
Creditors	Finance cost	251,154	Economic benefits allocated by the enterprise
Shareholders	Dividend allocation	302,517	
Government	Income tax	583,279	
Community	Donation	1,581	
Investors/shareholders	Total equity	8,962,933	Economic benefits retained by the enterprise

RESPECT EMPLOYEES' RIGHTS AND CO-DEVELOP WITH EMPLOYEES

China Water regards employees as a key integral part of its core competence. In the course of development, the Group strictly follows the provisions in the Labour Law and Labour Contract Law to protect and safeguard employees' interest.

Employment

Recruitment and promotion

China Water recruits and dismisses employees in strict accordance with the labour laws and regulations and in compliance with the labour standards to safeguard employees' interest. Upholding the fundamental principles of open recruitment, fair competition and merits, the Group has a wide range of channels for talent recruitment with emphasis on career planning, utilisation, management and training of employees to achieve reasonable mobility of personnel which allows recruitment and dismissal as well as promotion and demotion to engage personnel with the right range and fully utilise their talents. A labour contract is entered into between China Water and all its employees.



Remuneration and benefits

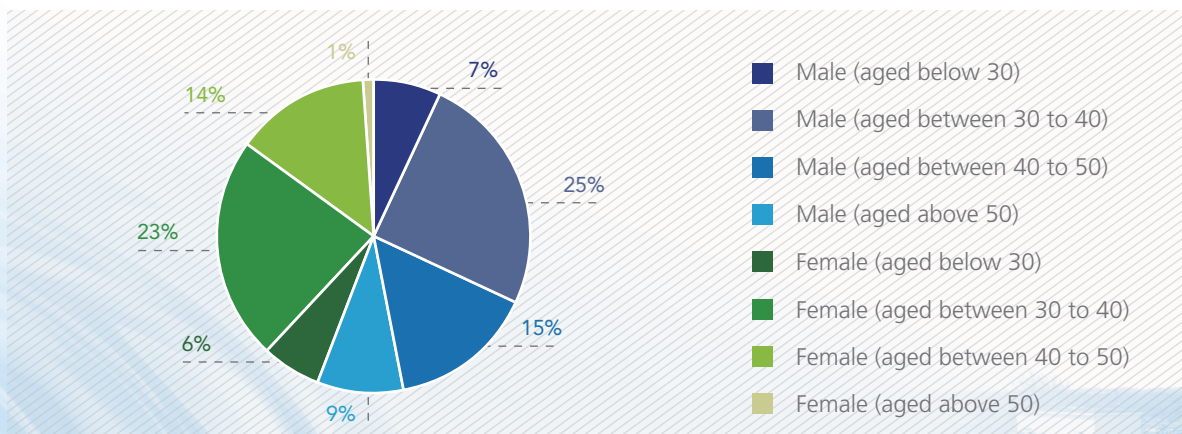
The remuneration system of China Water accords with the principle of “work more; get more” which fundamentally determines the remuneration based on individual performance, in addition to stocks, share options, annual salary, position compensation and performance-based allocation. The overall income of employees is closely linked with the economic benefits of the enterprise.

China Water provides a comprehensive range of benefits for its employees, including the payment of five insurances and one fund (五險一金) in accordance with the law; provision of a safe, comfortable and clean working environment equipped with a full range of work safety supplies; provision of transport, communication, holiday and relief allowances; and thorough implementation of paid leave system with paid-leave entitlements such as national statutory holidays and annual leave.

Anti-discrimination

China Water is strongly against discrimination in employment and treats all employees fairly regardless of race, ethnicity, gender and religion.

The Group’s employee structure by gender and age (B1.1)





The Group's employee distribution by position

Rank	Gender	No.	Percentage
Senior management	Male	291	84%
	Female	56	16%
Mid management personnel	Male	481	64%
	Female	272	36%
Technicians and operation workers	Male	2,604	54%
	Female	2,215	46%
Others	Male	629	53%
	Female	552	47%

The Group's male/female employee percentage, percentage of local employees and annual employee turnover (B1.2)

Indicator	As at 31 March 2017
Total no. of employees	7,100
Male	4,005 (56%)
Female	3,095 (44%)
Percentage of local employees	88.4%
Annual employee turnover	1.2%

Care for employees and the underprivileged in our team

China Water genuinely cares for its employees and advocates mutual support and co-development.

The Group not only offers competitive remuneration package and fringe benefits to its employees, but also provides necessary assistance to employees with family distress due to special circumstances.



Pingxiang Water Co., Ltd. sent its condolences to employees with serious illness



Jingzhou Water Affairs Co., Ltd. sent its condolences to the distressed in the community

Health and safety (B2.3)

Employee safety and health is one of the premises of sustainable development for an enterprise. China Water is committed to reducing the potential safety and health risks in the workplace of employees and adheres to the direction of “safety first and prevention” to provide employees with a compliant workplace equipped with a full range of production safety supplies.

We have clearly defined the duties of each position and established a set of operational procedures for equipment use. In addition, we regularly organise training so that our employees are familiarised with the management requirements and operational procedures.

We have established an accountability system for production safety and entered into the accountability letter for production safety target with each level in the hierarchy which states the person-in-charge for safety management.

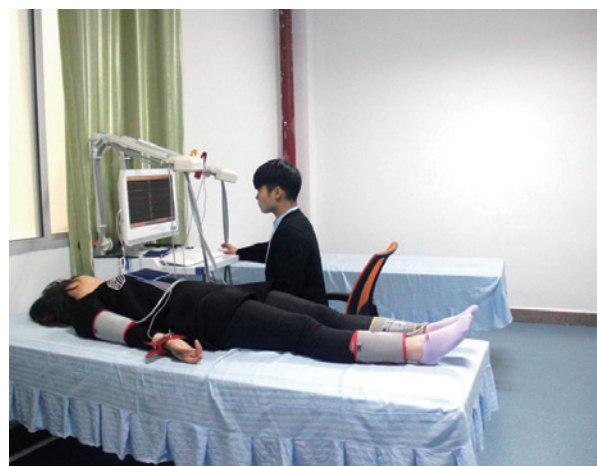
The Group regularly organises safety and health checks for various levels in the hierarchy to identify relevant risks and take precautionary measures.

During the reporting period, no fatal incident or material work injury of employees at work was identified by China Water (B2.1/B2.2).

Category	No. of cases
No. of employees involved in fatal incidents	0
No. of employees involved in work injury disability incidents	16
No. of lost days due to work injury	955



Employee experience organised by Jingzhou Water Affairs Co., Ltd.



Employee experience organised by Pingxiang Water Co., Ltd.

Training and development

China Water attaches great importance to training and development. We have a professional human resources department to plan and organise these events including professional seminars at which internal and external experts are invited for sharing, on-the-job training, skill contests and exchanges so as to enhance the operational skills of employees and strengthen the ability of management to troubleshoot and solve problems.

China Water provides an extensive platform for employee development. We insist on an employment mechanism which allows promotion and demotion as well as appointment and dismissal. We explore, train and put talents to the best use in our work practice. Management officers and technicians are selected via open recruitment and internal promotion where those who are competent and willing to learn are recruited. It also enables hardworking employees to refresh their work skills and enhance work efficiency. This genuinely allows employees to create value and achieve individual development in the course of corporate development.

China Water offers a myriad of training activities with different focuses.

The Group provides orientation training for new joiners to help them familiarise with its corporate culture, work environment, work conditions, staff relations and position requirements so that they can quickly align with the organisation's fundamental values.

We organise training for various positions

In the enterprise, each production and operation activity represents an economy activity to create value for its customers. The level of work efficiency of employees in each position directly affects the quality of products and standard of service of the enterprise. Each position forms an integral part of the enterprise's value chain. China Water organises training for various positions including onsite guidance, simulated operation, case analysis and role play an in effort to enhance the employees' operational skills and professional qualities.



China Water Group's water quality work meeting cum water quality testing personnel training class

We organise various themed seminars

China Water engages professional technicians and management personnel internally or externally on target basis to give lectures on special topics. During the reporting period, the Group successively organised feature seminars on finance, water plant standardised management, project budget management, project construction management, water quality testing and procedures as well as PPP projects. At the same time, the Group’s subsidiaries also look into their own management needs and organise these seminars according to the annual training plan.



China Water Affairs Group’s PPP model and practice feature exchange

We organise skill contests

China Water endeavours to create a learning environment in terms of knowledge and skills through organising skill contests to stimulate employees’ learning initiatives and encourage lifelong learning (B3.1/B3.2).

Rank	Gender	Average training hours	Percentage of personnel trained (%)
Mid to senior management personnel	Male	25.0	88%
	Female	24.0	90%
Lower management personnel	Male	48.2	96%
	Female	50.2	98%
Technicians and operation workers	Male	55.5	98%
	Female	56.0	98%



Jingzhou Water Affairs Group’s employee skill contest

Labour standards

China Water follows the relevant provisions in the Labour Law and the Labour Contract Law and complies with the relevant rules of the International Labour Standards (“ILS”) to safeguard the labour interest.

China Water respects the right of workers to choose their profession freely and any form of forced labour is strictly prohibited. All tasks are negotiated on voluntary basis. Employees are entitled to resign from work freely in accordance with the law. China Water does not require any employees to provide any collateral as a condition of employment.

Child labour is strictly prohibited. No child labour (aged below 16) is allowed for any position in China Water. Employment is subject to strict screening processes. Prior to recruitment, the account book and identification must be verified and submitted to the local public security bureau and the bureau for labour and employment for approval. Any use of child labour is strictly prohibited (B4.1).

China Water respects the right to rest for workers. Work hours should not exceed the national standards, i.e. no more than 40 hours per week. Any overtime work should be unanimously agreed with employees and compensated.

China Water treats the employees well and no physical assault, mental oppression or verbal abuse to employees is allowed. China Water does not discriminate employees because of their age, gender, skin, religion and marital status in employment and work practice.

A labour union is established by various levels of corporate bodies of China Water as required and employees may form or join a union of their own free will. Representatives of the union may enter into negotiation with the enterprise in terms of matters relating to the interest of employees such as employment, wages and benefits, education and development and etc.

A human resources department is established by China Water’s administrative headquarters and various levels of corporate bodies to regularly review and deal with violations of labour standards. During the reporting period, no violation of labour standards was identified (B4.2).



New year festival of union of Jingzhou Water Affairs Group



Autumn employee hiking organised by union of Pingxiang Water Co., Ltd.

SAFEGUARD THE INTEREST OF MULTI-PARTIES AND CO-DEVELOP WITH THEM

Supply chain management

China Water selects quality raw materials and related service providers to ensure product quality and standard of service by implementing the supplier preliminary review system and the tendering system for bulk materials in supply chain management.

In terms of tender, the Group has formulated the *Administrative Measures on Tender* 《招標管理辦法》 for procurement to implement project tender, centralised tender, open tender, tender invitation, tender discussion or price consultation based on different procurement size or procurement features.

The Group has prepared a catalogue of suppliers for bulk materials which pre-approves the qualifications of suppliers. Criteria for approval include not only the capabilities and quality of products and services of suppliers, but also whether or not the suppliers have in place established policies in areas of environmental protection and social risk management. The supplier catalogue will be updated each year according to the cooperation status and suppliers' environmental and social performance. China Water seeks to work closely with like-minded suppliers who also place great emphasis on monitoring financial risks and social risks (B5.2).

The Group's suppliers distribution by region (B5.1)

No.	Region	No. of suppliers
1	North China	28
2	Central China	86
3	East China	151
4	South China	76
5	Southwest China	38
6	Northwest China	4
7	Northeast China	3
Total		386

Note: No. of suppliers refers to the number of suppliers that have entered into supply contract with the enterprise during the reporting period, excluding suppliers of unit purchase.

Product liability

China Water highly values its product quality and sees it as the basis and foundation of corporate development. The Group implements product quality management in strict accordance with the relevant PRC laws and regulations and industry standards. The quality of tap water produced by our water companies must meet the Standards for Drinking Water Quality (GB5749–2006), whereas the discharge produced by our sewage treatment companies must meet the Standard of Pollutants for Municipal Wastewater Treatment Plant (GB18918–2002).



China Water has put in place a comprehensive product quality control system. On the one hand, it endeavours to optimise the water purification process to enhance product quality by investing in the construction of new water plants or the renovation of old water plants. On the other hand, it pushes ahead the development of product examination capabilities to achieve effective quality control. Relevant laboratories are set up according to the scale of subsidiaries of the Group. Currently, we have two full quality control laboratories that cover 106 items and 6 quality control laboratories that cover more than 42 items. The Group conducts self-testing or third party-testing in strict accordance with the national water quality testing standards to ensure the water quality is up to standard (B6.4).

During the reporting period, no recall of products due to product quality, safety and health reasons was identified by China Water (B6.1).

China Water aims to develop itself into a large-scale conglomerate that provides the highest quality services at its best endeavours. Positioned as a public service provider, the Group regards its services the key to create value and achieve performance. Service is always the focus of an enterprise. After years of resource integration, China Water has widely implemented the “one-stop” service and external service pledge across its subsidiaries while optimising the conditions of services and enriching the contents of services. All subsidiaries of the Group, especially the water companies, have set up a customer service department to handle user enquiries, business affairs and complaints. Meanwhile, the Group has also issued the operational management standards for water supply service which state the procedures and terms of the services (B6.2).

Anti-corruption

China Water is on no account engaged in bribery, blackmail, fraud and money-laundering. China Water has a zero-tolerance policy regarding abuse of power of duties and position for personal gain which damages the interest of users, suppliers and other third parties.

China Water has established various systems of finance, operations, investment and fundamental management to regulate the group and individual behaviours. Through the establishment of the internal disciplinary management office and audit departments, we systematically organise irregularities checks and publicly discloses the whistle-blowing hotline so that the Group is supervised internally and externally (B4.2/B7.2).

During the reporting period, no litigation relating to corruption was identified by China Water (B7.1).

CO-DEVELOP WITH THE COMMUNITY

China Water is committed to the design, construction, operation and management of city water infrastructures. Through constructing water plants, sewage treatment plants, water supply and drainage network layout and city integrated water environment improvement, it has greatly improved the city appearance, enhanced the living standard of urban and rural residents and facilitated the harmonious local economic development. In recent years, the Group has continued to expand its water business vertically and horizontally and put great efforts to facilitate urban-rural integrated water supply.



Opening ceremony of the water supply project of Ruiyang Water Plant of Gaoan Water Co., Ltd.



Gaoan Water Affairs Co., Ltd.'s Cunqian Water Plant opening ceremony

The development of China Water is also inseparably linked to community care and support. It cares for and listens to the requests of the community parties and use its best endeavours to assist community development so as to achieve co-development between the enterprise and the community. The Group is in support of the community education affairs, community infrastructure development and community environmental improvement. China Water prioritises the employment of local workers and selection of suppliers.

China Water devotes active efforts to repay the society by organising various kinds of poverty relief activities. It encourages its subsidiaries to organise special events to penetrate into the community, rural areas and families in distress to provide necessary assistance to the people in need in society. The Group offers free water and water discounts to users in distress in the city to allow all users to enjoy the basic right of use. In addition, it brings service into the community to provide free water equipment maintenance service to users with disabilities. It also introduces targeted poverty alleviation in remote rural areas to help solve the practical problems of water supply faced by rural users and provide necessary assistance to those in need. It organises a variety of fundraising and caring events and frequently visit orphanages and elderly homes to show its care for them. (B8.1/B8.2)



Open day of water plant of Pingxiang Water Co., Ltd. as part of the "two things to learn and one thing to do" efforts to show its care for left-behind children



Jingzhou Water Affairs Group Co., Ltd. participated at the Golden Autumn Schooling Assistance programme organised by the Hongmen Road community



Jingzhou Water Affairs Group Co., Ltd. kicked off the targeted poverty alleviation and "30,000" work series activities



Pingxiang Water Co., Ltd. made donations to employees with serious illness



Donation list of the third National Poverty Alleviation Day participated by the Jingzhou Water Affairs Group Co., Ltd.



Huizhou Daya Bay Yiyuan Water Purification Co., Ltd. visited the orphans at the welfare home

STOCK EXCHANGE'S ESG REPORTING GUIDE INDEX

Areas	"Comply or explain" Provisions	Recommended Disclosures	Pages
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	A1.3	Total hazardous waste produced	17
	A1.4	Total non-hazardous waste produced	17
	A1.5	Description of measures to mitigate emissions and results achieved	18
	A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	17
Aspect A2: Use of Resources	General disclosure		19
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Aspect A3: Environment and Natural Resources	General disclosure		20
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	20



Jingzhou Water Affairs Group Co., Ltd. visited Qingchuan Nursing Home



Huizhou Daya Bay Yiyuan Water Purification Co., Ltd. kicked off the "Bringing Service into the Community" campaign



Yuncheng Silver Dragon Water Affairs Co., Ltd. kicked off the community service activities

Note (1): Not meaningful

Areas	"Comply or explain" Provisions	Recommended Disclosures	Pages	
B. Social				
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Note (2): The relevant statistical process has not been established

REPORT OVERVIEW

This report sets out the comprehensive and systematic review and overview of China Water Affairs Group Limited in the environment, social and governance aspects for the year 2017.

Reporting period: 1 April 2016 to 31 March 2017

Format of report: Prepared in accordance with the ESG Reporting Guide of Appendix 27 to the Main Board Listing Rules of the Hong Kong Stock Exchange and the Sustainability Reporting Guidelines ("G4 Guidelines") issued by Global Reporting Initiative.

Publication: The report is prepared in both Chinese language and English language, which is published on the Group's website (<http://www.chinawatergroup.com>).

We sincerely invite feedbacks and recommendations from various parties (readers) regarding the report and the environment, social and governance aspects of the Group. Please contact us via the following means:

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