



光大水務
EVERBRIGHT WATER

CHINA EVERBRIGHT WATER LIMITED
中國光大水務有限公司

(Incorporated in Bermuda with limited liability)
(於百慕達註冊成立之有限公司)

(STOCK CODES 股份代號: U9E.SG & 1857.HK)

SUSTAINABILITY
REPORT
可持續發展報告 **2022**





**TO CREATE BETTER
INVESTMENT VALUE**
AND UNDERTAKE MORE
SOCIAL RESPONSIBILITY

創造更好投資價值
承擔更多社會責任





MR. HU YANGUO
胡延國先生

Executive Director
and Chairman
執行董事兼董事長

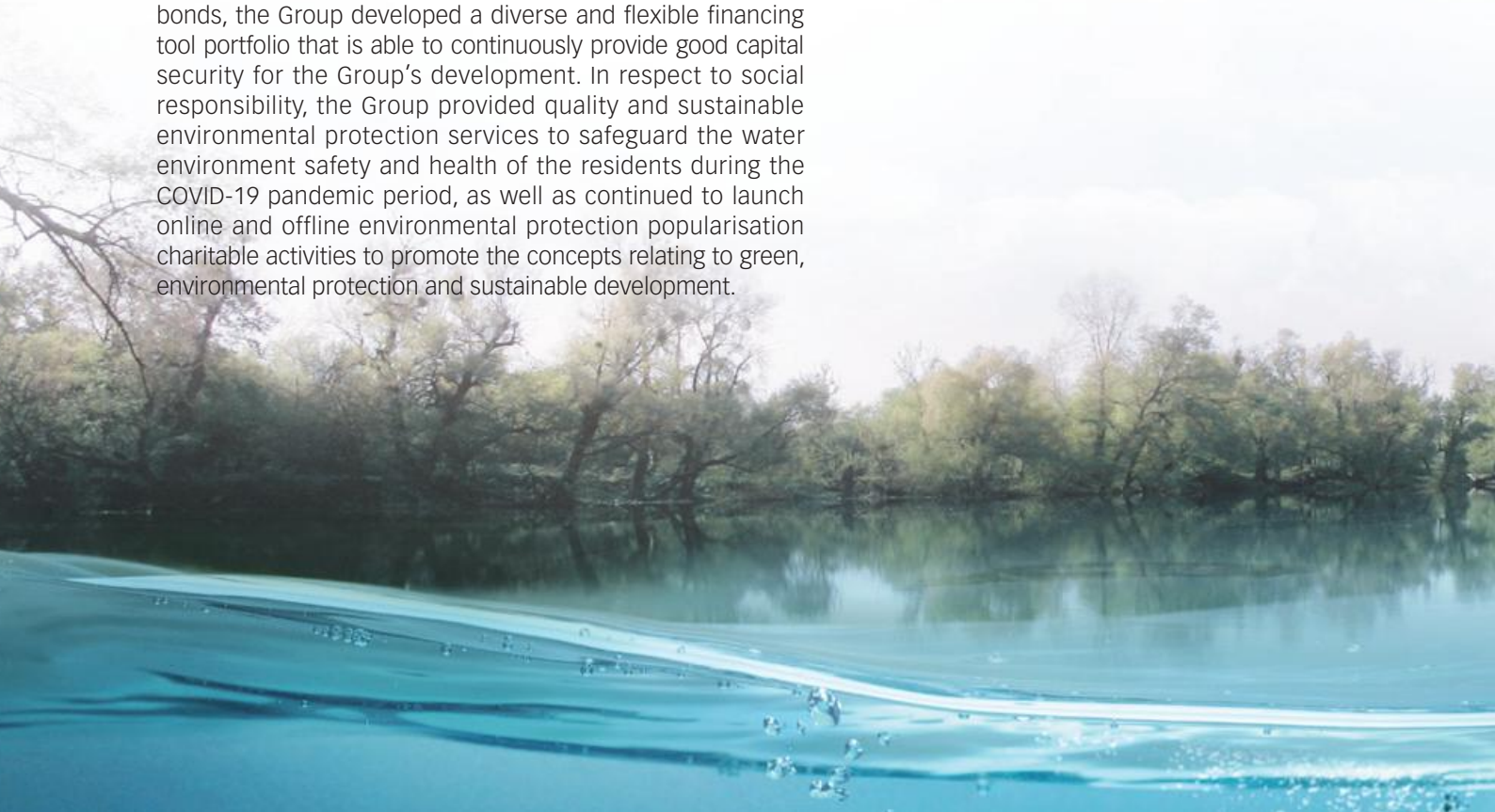
Looking back to 2022, the global macro-environment had been stressful. Given the complex and stressful global situation, together with the domestic triple pressure from shrinking demand, supply shocks and weakening expectations, the People's Republic of China ("**China**" or the "**PRC**") navigated through the challenges, steadily developing a grand blueprint for "Chinese-path to modernisation". In the meantime, China firmly adhered to its commitment and moved forward with determination, by continuously promoting its strategic goals of "Peaking Carbon Dioxide Emissions" and "Achieving Carbon Neutrality" ("**Dual Carbons**") and carrying out green and low-carbon development with high quality. Separately, China's environmental protection industry entered into a deep adjustment and embarked on a new journey with industrial upgrading.

望二零二二年，全球宏觀環境嚴峻態勢加劇。中華人民共和國（「**中國**」）在複雜緊張的全球形勢疊加國內需求收縮、供給衝擊和預期轉弱的三重壓力下爬坡過坎，穩步構建中國式現代化宏偉藍圖。與此同時，中國堅守承諾、篤定前行，持續推進其「**碳達峰、碳中和**」（「**雙碳**」）戰略目標，將「**高質量發展**」主題貫穿中國綠色低碳發展。中國環保行業進入深度調整，踏上新一輪產業升級之路。



Looking back to 2022, China Everbright Water Limited (“**Everbright Water**” or the “**Company**”, together with its subsidiaries, the “**Group**”) adhered to its corporate mission of “Being Devoted to Ecology and Environment for a Beautiful China”. While responding to various external difficulties and challenges with full effort, the Group solidified its strengths and expanded to new areas, reduced cost and enhanced efficiency, and continued to develop a sustainable development model that fits its characteristics and satisfies its needs. Therefore, the Group achieved remarkable results in all aspects of work. In relation to market expansion, the Group solidified and unleashed the potential of its traditional businesses including waste water treatment, and tapped on its specialised teams to conduct research on the various “water-related” industries and to explore new business directions, steadily expanding its water-related industry chain and developing environmental protection projects and services of various types with high quality and efficiency. In terms of operations management, the Group adopted carbon source substitution technology, promoted in-plant solar energy pilot programme, developed low-carbon demonstration projects, and carried out digital transformation. All these measures have successfully reduced the operating costs and enhanced the efficiency. In respect to technological innovation, the Group boosted its efforts and enhanced the application and conversion of its research results. Additionally, the Group’s multiple research projects received the national and provincial recognitions, strengthening its core technology competence. In terms of capital arrangement, by accumulating relevant experience through issuances of super and short-term commercial papers, perpetual medium-term notes and other types of bonds, the Group developed a diverse and flexible financing tool portfolio that is able to continuously provide good capital security for the Group’s development. In respect to social responsibility, the Group provided quality and sustainable environmental protection services to safeguard the water environment safety and health of the residents during the COVID-19 pandemic period, as well as continued to launch online and offline environmental protection popularisation charitable activities to promote the concepts relating to green, environmental protection and sustainable development.

回首二零二二年，中國光大水務有限公司（「**光大水務**」或「**本公司**」，連同其附屬公司合稱「**本集團**」）秉持「情系生態環境，築夢美麗中國」的企業使命，全力應對各類外部困難挑戰，固本拓新、降本增效，持續打造符合自身特點和需要的可持續發展模式，各項工作取得實效。市場拓展方面，鞏固挖潛污水處理等傳統業務，依託產業研究柔性團隊探索「新賽道」，穩步延伸「泛水」產業鏈佈局，打造種類多樣、優質高效的環保項目與服務；運營管理方面，應用碳源替代技術，推廣「廠內光伏」試點，打造低碳示範項目，推動數字化轉型，「降本增效」成效持續顯現；科技創新方面，加大相關投入及成果應用轉化力度，多項科研課題成果獲得國家、省級榮譽認可，強化科技核心競爭力；資本佈局方面，通過超短期融資券、永續中期票據等債券發行積累相關經驗，打造多元靈活的融資工具組合，為企業發展持續提供良好資金保障；社會責任方面，疫情期間以優質、不間斷的環保服務保障各地水環境安全與居民健康，並持續開展線上、線下環保科普公益活動，傳播綠色環保、可持續發展理念。



Look forward to 2023, despite the complicated global outlook, promotion of carbon reduction and sustainable development remains a global consensus. Everbright Water will put “Development” as the top priority, maintain its strategic stability, work in a diligent and pragmatic manner, and pursue steady progress, notwithstanding the pressure from the external macro environment, industry adjustment and upgrading, and transformation challenges. The Group will solidify and deepen its traditional business areas, steadily promote the growth of its business scale, and boost the efficiency and proficiency of its existing businesses through various methods, such as resource utilisation. While focusing on the water business, the Group will strengthen the expansion of the industrial waste water treatment business, and further explore new areas, such as the eco-agriculture sector, in a bid to tap into new directions relating to the “water-related business” concept. Moreover, by upholding the “Innovation-Driven Development” concept, the Group will accelerate the integration of various innovation factors, such as operating models and technology research and development (“R&D”), to enhance endogenous power. The Group will also solidify its management from various aspects, namely engineering, operations, finance, procurement, and safety and environment, to enhance the fundamentals for its development. Everbright Water will proactively adhere to the five development concepts of “Innovation, Coordination, Green, Openness and Sharing”, actively serve and engage in the new development paradigm, and strive to create its “second growth curve”, so as to steadily move toward its development vision of “Creating Value to Industries through Various Water-related Businesses”. By pursuing high-quality and sustainable development, the Group aims to foster the concurrent improvement of economic, social and environmental benefits, as well as to facilitate China’s high-quality development and green, low-carbon development progress.

MR. HU YANGUO*Executive Director and Chairman*

20 March 2023

展望二零二三年，儘管全球局勢紛繁，推動碳減排與可持續發展仍是全球共識。面對外部宏觀壓力、行業調整升級和自身轉型挑戰，光大水務將以「發展」為第一要務，保持戰略定力，勤奮務實、穩中求進；深耕傳統業務領域，穩步推動規模增長，並通過資源化利用等手段提升已有業務的效益效能；以水為基色，加大工業廢水處理業務的拓展力度與生態農業等領域的探索力度，切入「泛水+」領域新賽道；堅持創新引領發展，從經營模式、技術研發等多個維度加速創新要素聚集，提升內生發展動力；夯實工程、運營、財務、採購、安全與環境等管理基礎，築牢長足發展基石。光大水務將積極貫徹「創新、協調、綠色、開放、共用」五大發展理念，主動服務和融入新發展格局，努力打造第二增長曲線，穩步邁向「以水為源的產業價值創造」發展願景，以自身的高質量與可持續發展，促進經濟、社會與環境效益的同步提升，助力國家的高質量發展與綠色低碳進程。

胡延國先生*執行董事兼董事長*

二零二三年三月二十日

Table of Contents 目錄

5	Message From CEO 總裁寄語
10	About This Report 關於本報告
24	About Everbright Water 關於光大水務
38	Sustainability Governance 可持續發展管治
56	Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略
100	Environmental Responsibility 環境責任
130	Talent Development 人才發展
152	Stakeholder Engagement 持份者參與
168	Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標
181	Major Recognitions, Awards and Memberships 主要嘉許、獎項及會籍
187	Verification Statements 審核聲明
194	Key Statistics 主要數據
208	Appendix I – GRI Content Index 附錄I – GRI內容索引
223	Appendix II – SEHK ESG Reporting Guide Content Index 附錄II – 聯交所《環境、社會及管治報告 指引》內容索引
228	Appendix III – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Water 附錄III – 對光大水務有重大影響的 相關法律及規例的遵守情況

Message From CEO 總裁寄語



MR. TAO JUNJIE 陶俊杰先生

Executive Director and
Chief Executive Officer
執行董事兼總裁

The year 2022 was an important year for China to enter into a new stage of development. It was also a year that the Group achieved fruitful progress in terms of its exploration of advanced technology and innovation. During the period from 1 January 2022 to 31 December 2022 (the “**Reporting Period**”), the Group closely responded to China’s “Dual Carbons” strategic goals, while supporting regional strategies such as the ecological protection of the Yellow River and the Yangtze River basins. Focusing on water environment management and protection, the Group promotes the water business and creates better value through the combination and synergy of pollution and carbon reduction.

During the Reporting Period, Everbright Water adopted sustainable development as its core value and proactively implemented various measures in the following aspects:

Promoting “Dual Carbons” Strategic Goals

“Carbon Emission Reduction” is one of the important tasks in combatting pollution and responding to climate change during China’s “14th Five-Year Plan” period. The Group actively pursues green and low-carbon sustainable development by focusing on the “Dual Carbons” strategic goals. The Group also strives to be a top water environment management company that provides “service products” in the water industry.

零二二年是中國進入新發展階段的重要一年，也是本集團在探索先進技術工藝和創新業務上取得積極進展的一年。於二零二二年一月一日至二零二二年十二月三十一日期間（「**報告期**」），本集團緊跟中國「雙碳」戰略目標，支持黃河和長江流域生態保護等區域戰略，從水環境治理與保護為切入點，將減污與降碳相結合，推動水務業務在減污降碳的過程中達至協同增效，創造更好價值。

報告期內，光大水務以可持續發展為核心理念，在以下範疇積極實施多項舉措：

立足「雙碳」戰略目標

「碳減排」為中國「十四五」規劃時期污染防治攻堅戰及應對氣候變化的重要任務之一。本集團積極圍繞國家「雙碳」戰略目標，追求綠色低碳的可持續發展，致力於成長為水務行業「服務型產品」的頂級水環境治理公司。

Message From CEO 總裁寄語

During the Reporting Period, the Group took the lead in promoting the digitalisation of operations at its projects, improving the disclosure framework of greenhouse gases (“GHG”) information, and further tracking and evaluating carbon footprints. All these steps could identify strategies to reduce carbon footprints and formulate solutions to enhance carbon management. The Group also focuses on the synergies of “Reducing Pollution and Carbon Emission”, mainly in three aspects, including quality and efficiency improvement, green facilities, and energy self-sufficiency. It also actively explores high-efficiency technologies and energy recovery processes for waste water treatment, such as the “in-plant photovoltaic” pilot projects and the energy saving and consumption reduction in its waste water treatment plants in order to maximise the economic and environmental benefits of its projects. In addition, the Group has formulated the *Guidelines for Everbright Water’s Low-Carbon Waste Water Treatment Plants* and developed “Low-Carbon Demonstration Projects” that integrate several carbon reduction and resource utilisation measures. These efforts are made to promote the green and low-carbon development of the industry, and to contribute the Group’s wisdom and strengths to achieving the “Dual Carbons” strategic goals.

Creating Value to Industries through Various Water-Related Businesses

During the Reporting Period, the Group focused on its water business as fundamental, and aimed to develop its “water-related” industrial chain, thereby creating and innovating value to industries through various water-related businesses.

In terms of business deployment, the Group took the initiative to break the boundaries of departments and teams, and gradually established several specialised teams. By conducting extensive research which brings in new ideas, models, technologies and processes, the Group successfully completed various in-depth research reports and concluded a number of preliminary collaboration opportunities. By leveraging on its advantages on the traditional business such as waste water treatment, the Group aims to venture into “water-related” business, thereby further expanding the connotation and extension of the business, and promoting the value creation of the water industry chain.

Thanks to this, the Group secured a number of industrial waste water treatment projects during the Reporting Period, and secured its first municipal sludge treatment and disposal project, which shows that the direction of its industrial research is correct and its hard work paid off. In addition, the Group will continue to explore and conduct research on areas such as the national rural revitalisation strategy, pay close attention on high-quality business opportunities, further enriching the Company’s business model in the future, and improving the “water-related” industry chain.

報告期內，本集團率先以旗下項目為依託，推動運營數字化，完善溫室氣體（「溫室氣體」）信息披露框架，進一步對碳足跡實施追蹤與評估，以確定減少碳足跡的渠道，制定優化碳管理的方案。本集團亦聚焦「減污降碳」的協同增效，重點關注提質增效、綠色設施和能源自給三個方面，積極探索污水處理的高效能科技與能源回收工藝，例如「廠內光伏」試點項目與污水處理廠節能降耗管理，放大項目的經濟和環境效益。此外，本集團制定了《光大水務低碳污水處理廠工作指引》，並著手打造了融合多項減碳、資源化利用措施的「低碳示範項目」，致力於推動行業的綠色低碳發展，為實現國家「雙碳」戰略目標貢獻智慧和力量。

推動「泛水」產業鏈價值創造

報告期內，本集團堅持以水為基色，著眼「泛水」產業鏈佈局，推動產業鏈的價值創新和創造。

在業務部署方面，本集團主動打破部門、團隊邊界，陸續成立多個產業研究柔性團隊，透過廣泛調研啟發新思路、新模式，引入新技術、新工藝，形成多份深度調研報告，達成多個合作意向，以污水處理等傳統業務優勢切入泛水領域，進一步擴展業務的內涵與外延，推動泛水產業鏈的價值再造。

得益於此，本集團於報告期內簽署了多個工業廢水處理項目，並取得了首個市域級的污泥處理處置項目，進一步證明了其產業研究方向正確，投入見效。此外，本集團亦圍繞國家鄉村振興戰略等領域繼續摸索調研，密切跟進優質業務機會，助力未來進一步豐富本公司業態，完善「泛水」產業鏈佈局。

Message From CEO 總裁寄語

Promoting Ecological Civilisation

During the Reporting Period, the Group continued to focus on the water environment sector to ensure stable operation, energy conservation and efficiency enhancement of its operating projects, and orderly and safe progress of projects under construction. At the same time, the Group steadily expanded its high-quality water projects, implemented high-quality development ideas, and continued to enhance its market position. With its solid business strength, the Group promoted the sustainable development of the water environment in various places and contributed to the national ecological civilisation.

As of 31 December 2022, the Group invested in and held 161 environmental protection projects, undertook 4 engineering, procurement and construction (“EPC”) projects and 5 operation and management (“O&M”) projects, with a total designed daily water treatment capacity of 7,248,700 m³.

Emphasising on Talent Development

Adhering to its “People-Oriented” management philosophy, the Group regards talent development as one of the key driving forces of its business development. Therefore, the Group always pays great attention to employees’ career planning and personal development needs, providing them with a path to enhance their professional skills and a platform to realise their self-worth.

The Group has optimised its well-rounded talent development system by improving the systems for recruitment and selection, training and assessment, performance evaluation, rewards and punishments, and promotion, with the aim of creating a fair and high-quality career environment. During the Reporting Period, the Group increased its efforts in organising trainings, and established a human resources management information system and a personnel quality evaluation model. This helps further expand its talent development, and convert the talent development strategy into tangible measures that every employee can participate in.

Fostering Technology R&D and Innovation

Adhering to the ethos of “Innovation-Driven Development”, the Group emphasises on “Application-Oriented Transformation” in technology R&D and innovation, encouraging the team to accelerate the R&D and deployment of new technologies, thereby enhancing the Group’s core technological competitiveness and creativity.

助力生態文明建設

報告期內，本集團繼續深耕水環境領域，確保旗下投運項目穩定運營、節能增效，在建項目工程有序、安全推進，同時穩步拓展優質水務項目，落實高質量發展思路，持續鞏固市場地位，以穩健的業務實力，並促進各地水環境的可持續發展，助力國家生態文明建設進程。

截至二零二二年十二月三十一日，本集團投資並持有161個環保項目，承接4個工程總包（「EPC」）項目及5個委託運營（「委託運營」）項目，設計日水處理總規模7,248,700立方米。

重視人才培養

本集團秉承「以人為本」的管理理念，視人才培養為本集團發展的核心驅動力之一，因此高度關注員工的職業生涯規劃與個人發展需求，致力於為員工提供增強專業素質的渠道與實現自我價值的舞台。

本集團通過完善招聘選拔、培訓考核、績效評估、獎懲晉升等制度，優化全方位人才培養體系，著力於打造一個公平優質的職業環境。報告期內，本集團加大培訓資源投入，建立人力資源管理信息系統與人員素質評價模型，將人才發展戰略轉化為每位員工可親身參與的具體措施。

促進科技研發與創新

本集團堅持「創新引領發展」的理念，強調「應用轉化」為目標的科技研發與創新，鼓勵團隊加速新型技術的研發及佈局，提升本集團的核心科技競爭力與創造力。

Message From CEO 總裁寄語

During the Reporting Period, with its technological advantages and experience in water environment management, waste water and sludge treatment, the Group continued to expand its “full industry chain” service capabilities from early project design to final project operation and management. The Group has also improved its existing technologies, pursuing a higher level of decontamination efficiency and environmental management. The Group has constructed a fully underground intelligent waste water treatment plant that requires minimal manual supervision. Such plant is integrated with the above-ground ecological park, which not only saves precious land resources, but also serves as a recreational area for the public. At the same time, in order to further upgrade the automation level of waste water treatment plants and strive for “Carbon Emission Reduction”, the Group has strengthened its information technology and promoted the “Intelligent Water” information management system, to accurately control the operation and electricity consumption of waste water treatment plants.

Carrying out Environmental Promotion and Education

As a long-term frontliner for environmental promotion and education, the Group firmly adheres to its original aspiration and actively responds to government initiatives by transforming its water treatment projects into environmental education bases for public visits which provide on-site visits, practical learnings and technical trainings simultaneously. With the gradual easing of the pandemic measures, the bases began to allow physical visits as and when permitted. At the same time, the Group continued organising virtual public activities to widen the audience outreach and enhance the public’s knowledge on environmental protection and water conservation. During the Reporting Period, Everbright Water’s Xianyang Waste Water Treatment Project (“**Xianyang Project**”) was selected as “Beautiful China Specialised Practice Education Hub”; Suzhou Wuzhong Chengnan Waste Water Treatment Project (“**Suzhou Project**”) was selected as “Popular Benchmark Waste Water Treatment Plant for 2022-2023” and “Suzhou Environmental Protection Demonstration Enterprise”; Jiangsu Jiangyin Waste Water Treatment Project (“**Jiangyin Project**”) was awarded the title of “Ecological Environmental Education Hub in Wuxi”, etc. In addition, the Group has continued its collaboration with various environmental protection and technology associations, and government departments for many years to launch environmental protection education and publicity activities, including events such as “World Water Day”, “China Water Week” and “World Earth Day”.

報告期內，本集團憑藉多年來在水環境治理、污水及污泥處理的技術優勢，不斷拓展從前期項目設計到最終項目運營管理的「全鏈條」服務能力，並在已有技術基礎上推陳出新、追求更高的除污效能及環境治理水平。本集團已建成少人值守的全地下式智慧污水處理廠，並與地上生態公園結合，既可以節約寶貴土地資源，亦成為市民休閒的目的地。同時，為進一步提升污水處理廠自動化水準，助力「碳減排」，本集團加強信息化建設，促進「智慧水務」信息管理體系的推廣，實現對污水處理廠運行狀況與用電耗能的精準把控。

開展環保宣傳與教育

本集團積極響應國家號召，秉持初心使命，長期活躍在環保科普教育與宣傳工作的前沿陣地，將旗下水務項目打造為環保教育基地，集參觀、實踐學習、技能培訓為一體，面向公眾開放。隨著疫情形勢逐步緩和，各基地在條件允許的情況下，開始恢復線下接待參觀；同時，本集團依舊堅持同步推動線上形式的公眾開放活動，擴大受眾面積，增加群眾的環保節水知識。報告期內，光大水務的咸陽東郊污水處理項目（「**咸陽項目**」）獲選為「美麗中國專題實踐教育基地」；蘇州吳中城南污水處理項目（「**蘇州項目**」）獲選為「2022年-2023年度受公眾歡迎標杆污水廠」和「蘇州市環保示範性企業」；江蘇江陰污水處理項目（「**江陰項目**」）榮獲「無錫市生態環境教育基地」稱號等。此外，本集團亦連續多年與各環保、科技協會及政府機構合作展開環保教育宣傳，包括「世界水日」、「中國水週」及「世界地球日」等專題活動。

Message From CEO 總裁寄語

Summing Up

Following the global trend of actively responding to climate change and the national trend of accelerating the development of ecological civilisation, the Group will continue focusing on the area of water environment management, seizing opportunities arising from the relevant policies, enhancing the level of intelligence and digitalisation, and carrying out technological innovation and research. The Group will focus on good business opportunities to drive its sustainable development to a new level.

TAO JUNJIE

Executive Director and Chief Executive Officer

20 March 2023

結語

在全球積極應對氣候變化和中國加快生態文明建設的大趨勢下，本集團將繼續深耕水環境綜合治理領域，緊抓政策機遇，提升智慧和數字化水平，持續技術創新攻關，著眼優質業務機會，推動業務可持續發展再上新台階。

陶俊杰

執行董事兼總裁

二零二三年三月二十日

Board oversight of environmental, social and governance (“ESG”) and climate change issues 董事會對環境、社會及管治（「ESG」）及氣候變化事宜的監管

In line with its long-term sustainability belief, the board of directors of Everbright Water (the “**Board**”, and each member, a “**Director**”) is responsible for (i) formulating the Group’s policies, strategies and objectives relating to ESG, climate change and responsible investment; (ii) overseeing the performance and effectiveness of the Group’s ESG, climate change and responsible investment; and (iii) identifying and evaluating significant ESG and climate change-related issues and their prioritisation in relation to the Group’s business and/or other key stakeholders. The Board is also responsible for reviewing the Group’s Sustainability Report.

秉承長期可持續的發展理念，光大水務董事會（「**董事會**」，其中每位簡稱「**董事**」）負責(i)制定本集團ESG、氣候變化及責任投資的政策、策略及目標；(ii)監督本集團踐行ESG、氣候變化及責任投資的表現與成效；及(iii)識別及評估涉及本集團業務及／或其他重要持份者的ESG和氣候變化相關的重大議題及其優次排列。董事會亦負責審閱本集團的可持續發展報告。

The Board has reviewed the material ESG issues and will manage and monitor these issues and take them into consideration in determining the Group’s business directions and strategies. The Group will actively undertake social responsibility in pursuing a better water environment.

董事會已審閱有關ESG的重大議題，將管理和監督這些議題，並在制定本集團經營方針及戰略時將該等議題列入考慮範圍。本集團將積極承擔社會責任，創造更優質的水環境。

About This Report 關於本報告

Introduction

Everbright Water is an environmental protection company focusing on comprehensive water environment management. It is listed on the Main Board of the Singapore Exchange Securities Trading Limited (“SGX” or “SGX-ST”) and the Main Board of the Stock Exchange of Hong Kong Limited (“SEHK”) (stock codes: U9E.SG and 1857.HK), with the controlling shareholder China Everbright Environment Group Limited (stock code: 257.HK, “Everbright Environment”).

Everbright Water is committed to creating the value to industries through various water-related businesses. At present, it has developed a full-fledged business coverage, which includes raw water protection, water supply, municipal waste water treatment, industrial waste water treatment, reusable water, river-basin ecological restoration, sludge treatment and disposal, etc. Meanwhile, the Company has also formed a full industry chain in the water business, including project investment, planning and design, technological R&D, engineering and construction, and operations management among others. In addition, based on China’s “Dual Carbons” strategic goals, Everbright Water proactively explores a path for pollution and carbon reduction, laying a solid foundation to achieve carbon neutrality in waste water treatment in the future. Furthermore, Everbright Water is actively focusing on “Intelligent water”, by making full use of its years of experience to integrate intelligent transformation into business practices. These efforts could complement the construction of smart cities and promote the sustainable development of China’s water industry.

報告簡介

光大水務是一家專注於水環境綜合治理的環保企業，為新加坡證券交易所有限公司（「新交所」）及香港聯合交易所有限公司（「聯交所」）主板上市公司（股份代號：U9E.SG及1857HK），控股股東為中國光大環境（集團）有限公司（股份代號：257.HK，「光大環境」）。

光大水務致力於打造以水為源的產業價值創造，目前已實現原水保護、供水、市政污水處理、工業廢水處理、中水回用、流域治理及污泥處理處置等全業務範圍覆蓋，精專於項目投資、規劃設計、科技研發、工程建設、運營管理等業務領域，形成水務行業全產業鏈佈局。與此同時，圍繞中國「雙碳」戰略目標，光大水務積極探索減污降碳的協同路徑，為未來實現污水處理碳中和目標奠定基礎。同時，光大水務積極以「智慧水務」為重點，運用其多年的行業經驗，將智能化轉型與業務實踐結合，以配合建設智慧城市，促進中國水務行業的可持續發展。



About This Report 關於本報告

The Sustainability Report 2022 (this “**Report**”) covers the Group’s main sustainable development initiatives and performance during the Reporting Period. This Report was prepared in accordance with Rule 13.91 and Appendix 27 *Environmental, Social and Governance Reporting Guide* of the Rules Governing the Listing of Securities on the SEHK, as well as the Listing Manual of SGX (Rules 711A, 711B and Practice Note 7.6 *Sustainability Reporting Guide*). The *GRI Sustainability Reporting Standards* (the “**GRI Standards**”) is a globally and widely recognised and applied sustainability reporting standard, which provides a standardised framework for corporates to disclose non-financial information. Everbright Water has followed the GRI Standards⁽¹⁾ to report for the period from 1 January 2022 to 31 December 2022, to comprehensively illustrate material issues, and to be in line with most of its industry peers in Singapore, Hong Kong and other countries and regions around the world. In addition, Everbright Water adheres to the corporate mission of “Devoted to Ecology and Environment for a Beautiful China”, by integrating the Sustainable Development Goals (“**SDGs**”) of the United Nations into its environmental and social management strategies, to promote global environmental protection and ecological conservation. In response to the risks and opportunities of climate change that the Group may face in the future, Everbright Water actively refers to the recommendations of the Task Force on Climate-Related Financial Disclosures (“**TCFD**”) for the purpose of disclosing certain information of the Group including carbon emissions, carbon emission intensity, carbon emission management strategy and climate-related risks, etc., thereby enhancing its ESG disclosure.

二零二二年可持續發展報告（「**本報告**」）涵蓋了本集團於報告期內的主要可持續發展策略和表現。其內容依循聯交所證券上市規則第13.91條及附錄二十七所載的《環境、社會及管治報告指引》以及新交所上市手冊（第711A條、第711B條和第7.6項應用指引《可持續發展報告指引》）所編寫。《GRI可持續發展報告準則》（「**GRI準則**」）是全球廣泛應用的可持續發展報告標準，為企業披露非財務資訊提供了規範的框架。光大水務已依循GRI準則⁽¹⁾報導2022年1月1日至2022年12月31日期間的內容，務求全面涵蓋實質性議題，並與新加坡、香港及全球其他國家和地區的大部份同行企業保持一致。此外，光大水務秉承「情繫生態環境，築夢美麗中國」的企業使命，將聯合國可持續發展目標（「**SDGs**」）全面融入到其環境及社會管治戰略當中，推動全球環境保護和生態文明建設。為應對本集團未來面臨的氣候變化的風險和機遇，光大水務積極參照「氣候相關財務信息披露工作組」（Task Force on Climate-Related Financial Disclosures，簡稱「**TCFD**」）的建議，公開本集團的碳排放量、碳排放強度、管理碳排放戰略及氣候相關風險等信息，務求進一步加強本集團的ESG披露。



About This Report 關於本報告

The data and information disclosed in this Report are based on materiality assessment, stakeholder engagement and other relevant sustainability reporting guidelines, covering the sustainability performance of the Group's Shenzhen, Hong Kong and Singapore offices, projects under construction⁽²⁾ and operating projects that are under the operational control of the Group during the Reporting Period^{(3), (4)}. During the Reporting Period, the issues that stakeholders are concerned about were similar to those of the previous year, and the reporting scope of this Report has not changed significantly from the previous year's report. The details of the Group's relevant entities can be found in Notes to the Financial Statements as included in the Company's annual report for the Reporting Period (the "Annual Report 2022"). The data collection and analysis of this Report were carried out in accordance with relevant international, national and local guidelines or standards, including the use of calculation methodologies approved by the Clean Development Mechanism ("CDM"), the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (2019 Revision) from the Intergovernmental Panel on Climate Change ("IPCC"), and specification of ISO 14064-1:2018 Greenhouse Gases – Part 1: Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals, to estimate the greenhouse gas emissions and offsets. All data included in this Report has been rounded except for integers and data disclosed in the Annual Report 2022⁽⁵⁾.

The Group commissioned the Hong Kong Quality Assurance Agency as a third-party verification institution to conduct an independent audit and verification on the content and data of this Report. With the continuation of ISO14064-1 standard audit verification on the quantification and reporting of GHG emissions and removals at the organisational level, the corresponding verification statements have been appended to this Report. The Board reviewed and approved the content and scope of this Report to demonstrate that the Board had considered sustainable development issues as part of its strategy formulation, identified material ESG issues, and overseen the management and monitoring of these issues.

本報告所披露的數據及信息是基於實質性評估、持份者參與和其他相關的可持續發展報告指引釐訂，涵蓋了本集團在報告期內於深圳、香港和新加坡辦公室以及本集團擁有運營控制權的在建⁽²⁾與運營項目的可持續發展表現^{(3),(4)}。於報告期內，持份者關注的議題與上一年相似，本報告的匯報範圍較上一年報告並無重大改變。本集團的相關實體資料可參閱本公司關於報告期的年度報告（「二零二二年度報告」）中的財務報表附註。本報告的資料收集及分析乃根據相關國際或當地指引或準則進行，包括使用清潔發展機制（「CDM」）核准、政府間氣候變化專門委員會（「IPCC」）《2006年IPCC國家溫室氣體清單指南2019修訂版》核准的計算方法，及ISO 14064-1:2018《溫室氣體 — 第一部分：組織層級溫室氣體排放和清除的量化和報告指南》之規範，估算項目的溫室氣體排放及抵銷。除了整數數據及二零二二年度報告已公佈的數據外，本報告所載的所有數據均已作捨入調整⁽⁵⁾。

本集團已委託香港品質保證局作為第三方核證審核機構，為本報告的內容及數據進行獨立審核及認證，並於今年繼續進行針對組織層面溫室氣體排放和移除的量化及報告的ISO14064-1標準審計驗證，其相關審核聲明已附載於本報告中。本報告的內容及範圍亦經過董事會審閱及批准，以表明董事會已將可持續發展議題視為戰略制定的一部分，確定了重大的ESG議題，並對該等議題的管理和監測進行了監督。

About This Report 關於本報告

Reporting Principles

This Report is based on seven reporting principles: Materiality, Quantification, Balance, Consistency, Stakeholder Inclusiveness, Sustainability Context and Integrity:

報告原則

本報告以重要性、量化、平衡、一致性、持份者包容性、可持續的脈絡及完整性這七項匯報原則為編製基礎：

<p>1 Materiality 重要性</p> <p>The Group regularly conducts materiality assessments to identify material ESG issues which the Group and its stakeholders are concerned with, and to ensure that these issues are illustrated in this Report. 本集團定期進行重要性評估，以識別本集團和本集團的持份者所關注的重大ESG議題，並確保該等議題於本報告中進行披露。</p>	<p>2 Quantification 量化</p> <p>The Group attempts to present quantitative information with explanations. 本集團盡可能展示量化的資訊並附帶說明。</p>	<p>3 Balance 平衡</p> <p>The Group presents the positive and negative impacts of its business in a transparent manner. 本集團以透明方式呈列其業務所帶來的正面及負面影響。</p>
<p>4 Consistency 一致性</p> <p>This Report has been drafted in a consistent manner to allow readers to make meaningful comparisons of the Group's ESG performance. 本報告盡量採用與以往一致的編製方法，以供讀者對本集團的ESG表現進行有意義的對比。</p>	<p>5 Stakeholder Inclusiveness 持份者包容性</p> <p>The Group's stakeholders are widely covered, which include its investors/shareholders, government, customers, business partners/suppliers, employees, villagers/local communities, non-governmental organisations ("NGOs"), investment analysts and media. 本集團的持份者包含範圍較廣，主要有投資者／股東、政府、客戶、業務夥伴／供應商、員工、村民／當地社區、非政府組織（「非政府組織」）、投資分析員及媒體。</p>	
<p>6 Sustainability Context 可持續的脈絡</p> <p>In addition to the significant ESG factors, sustainable development goals and climate-related financial risks are the key factors for sustainability in this Report. 本報告的可持續性關鍵因素除了有重大ESG因素，還有可持續發展目標和氣候相關的財務風險。</p>	<p>7 Integrity 完整性</p> <p>The Group consistently incorporates material issues, issue boundaries, relevant significant impacts and stakeholder views into this Report, and adheres to the first six reporting principles to ensure a complete disclosure. 本集團連貫地將重大議題、議題邊界、相關顯著影響和持份者意見融入本報告，並謹遵前列六項報告原則以確保披露完整。</p>	

Accessibility of this Report

This Report is available in both Chinese and English languages and has been uploaded onto the SGXNet (www.sgx.com), the websites of Hong Kong Exchanges and Clearing Limited (www.hkexnews.hk) and Everbright Water (www.ebwater.com). If there is any inconsistency or discrepancy between the Chinese version and the English version, the English version shall prevail; in the event of any inconsistency or discrepancy between this Report and the Annual Report 2022, the Annual Report 2022 shall prevail unless otherwise stated.

本報告獲取

本報告備有中英文版本，已上載至SGXNet (www.sgx.com)、香港交易及結算所有限公司網站(www.hkexnews.hk)及光大水務網站(www.ebwater.com)供下載及閱覽。如中、英文版本有任何抵觸或不相符之處，應以英文版本為準；除非另有說明，若本報告和二零二二年度報告有任何抵觸或不相符之處，應以二零二二年度報告為準。

About This Report 關於本報告

Contact Us

The Group welcomes all stakeholders and the public to provide valuable comments and suggestions to info@ebwater.com on the content of this Report, the reporting approach as well as the Group's sustainability performance.

Notes:

- (1) GRI refers to the Global Reporting Initiative.
- (2) For environmental data of projects under construction, only fuels, electricity and water consumption and associated GHG emissions are disclosed in this Report.
- (3) Except for the fuel consumption of projects under construction or other data specified otherwise, data of contractors and/or subcontractors is not disclosed in this Report.
- (4) Over 99% of the Group's projects are located in China. The environmental performance of the projects located in China is disclosed in this Report. Since the assets related to Qingdao Waste Water Treatment Project (Haibohe Plant) and the four projects undertaken by Everbright Water under EPC model are owned by its customers, Everbright Water has no right of access to the environmental data of such projects, including electricity consumption, water consumption, etc. As such, the environmental performance of these projects is not disclosed in this Report.
- (5) The numbers stated in various tables of this Report may not add up to totals or 100% due to rounding.

Reporting Scope

To determine the scope and boundaries of this Report, the Group engages an independent sustainability consultant to conduct a comprehensive materiality assessment every year to identify the economic, environmental and social issues that are of great concerns to the Group and its stakeholders. The Group prioritises and incorporates topics into this Report to ensure the relevance of this Report, thereby further advancing its work on sustainable development.

聯絡我們

歡迎各持份者及公眾電郵至info@ebwater.com，就本報告內容、報告方式和本集團在可持續發展方面的表現提供寶貴意見及建議。

附註：

- (1) GRI是指全球報告倡議組織。
- (2) 有關在建項目的環境數據，本報告僅披露其燃料、電力及水消耗量以及相關的溫室氣體排放。
- (3) 除了有關在建項目的燃料消耗量或其他另有註明的數據外，承包商及／或分包商的數據不會於本報告中披露。
- (4) 本集團超過99%的項目位於中國，本報告披露位於中國的項目環境表現。由於青島污水處理項目（海泊河廠）及光大水務以EPC模式承接的四個項目所涉及的資產由其客戶擁有，光大水務無權存取其環境數據（包括電力消耗量及水消耗量等）。因此，這些項目的環境表現不會於本報告中披露。
- (5) 本報告所載各類表格中包含的數字，由於四捨五入關係，數值加起來可能不等於總數或100%。

報告範圍

為確定本報告的範圍及邊界，本集團每年均會委聘獨立可持續發展顧問進行一次全面的實質性評估，以識別本集團及持份者最為關注的經濟、環境和社會議題。本集團將議題進行優先排序並納入本報告中，以確保本報告的針對性，從而進一步推動本集團在可持續發展上的工作。

About This Report 關於本報告

GRI 2-29

Communication with Stakeholders

In order to ensure that the Group is able to actively respond to current and emerging risks and opportunities in the market, stakeholder engagement is particularly important to the Group's sustainable development strategy. The Group maintains close communication with various stakeholders through diversified channels, understands their needs and expectations, strives to promote a clear and positive mutual understanding, and maintains trust among its stakeholders in the Group. Stakeholder opinions also help the Group to identify its priorities and formulate corresponding development strategies.

Everbright Water's business involves various types of stakeholders, including investors/shareholders, government, customers, business partners/suppliers, employees, villagers/local communities, NGOs, investment analysts and the media. The stakeholders are identified based on the following five principles:

Responsibility 責任	Influential Power 影響力	Proximity 鄰近性	Dependency 倚靠性	Representativeness 代表性
Stakeholders connected to the Group through legal, financial, operational procedures, contracts, and/or policies 通過法律、財務、運營規則、合約及／或政策與本集團聯繫的持份者	Stakeholders with formal decision-making power or informal influence on the Group 對本集團具有正式決策權或非正式影響力的持份者	Stakeholders who live closely to the Group's operations and whom the Group interacts closely with 居於本集團運營廠房附近及與日常運作關係密切的持份者	Stakeholders who are highly dependent on the Group's business operations 在很大程度上依靠本集團業務運營的持份者	Stakeholders who are representing the sectors which are closely connected with the Group 來自與本集團聯繫最緊密的業界代表的持份者

Throughout the life cycle of the projects, the Group regularly invites stakeholders to express their opinions on the projects from planning to operation. By understanding and identifying the priorities and concerns related to sustainable development issues, the Group could improve its environmental protection performance and meet stakeholders' expectations and formulate effective development strategies. The main communication channels and frequencies are as follows:

與持份者溝通

為確保本集團能夠積極應對市場中現有及新興的風險與機遇，持份者參與是本集團制定可持續發展策略過程中尤其重要的一環。本集團透過多元化的渠道與各持份者保持緊密溝通，主動了解他們的需要及期望，致力促進清晰及正面的相互了解，並維繫各持份者對本集團的信任。持份者的觀點亦有助本集團釐清先決事項，並制定相應的發展政策。

光大水務的業務涉及多個持份者組別，包括投資者／股東、政府、客戶、業務夥伴／供應商、員工、村民／當地社區、非政府組織、投資分析員及媒體。持份者的界定基於以下五個原則：

本集團在項目的生命週期中，定期邀請持份者對各項目的規劃以至運營期間的事項發表意見，了解及識別優先且備受關注的可持續發展議題，從而改善環保表現和達到持份者的期望，並制定有效的發展戰略。主要溝通渠道和頻率如下：

About This Report

關於本報告



Investors/Shareholders 投資者/股東

Annual/special general meeting

股東週年／特別大會

- Annually/as needed
每年／根據需要

Press release/ announcement/circular

新聞稿／公告／通函

- Regularly/as needed
定期／根據需要

Results presentation

業績發佈

- Semi-annually
每半年

Interim/annual report

中期／年度報告

- Annually
每年

Roadshow

路演

- Regularly/as needed
定期／根據需要

Meeting/telephone conference

會議／電話會談

- Regularly/as needed/upon request
定期／根據需要／根據請求



Government 政府

Progress report

進度報告

- Weekly/monthly/quarterly
每週／月／季度

Site visit

現場考察

- Weekly/monthly/quarterly
每週／月／季度

Meeting

會議

- Weekly/monthly/quarterly
每週／月／季度

WeChat and QQ

微信及QQ

- As needed
根據需要

Phone/email

電話／電郵聯繫

- Weekly/monthly/quarterly
每週／月／季度

Survey on customer satisfaction

客戶滿意度調查

- Annually
每年



Customers 客戶

Meeting

會議

- As needed
根據需要

Phone/email

電話／電郵聯繫

- Weekly/monthly/quarterly
每週／月／季度

Survey on customer satisfaction

客戶滿意度調查

- Annually
每年

About This Report 關於本報告



Business Partners/ Suppliers 業務夥伴／供應商

Pre-tender meeting 採購招標會

- Every tender event
每次招標活動

Phone interview 電話回訪

- As needed
根據需要

Questionnaire 意見調查

- Ad hoc
不定期

WeChat and QQ 微信及QQ

- As needed
根據需要



Employees 員工

Working meeting/ project meeting 工作會議／專題會議

- Regularly
定期

Performance assessment meeting 表現評估會議

- Interim/year-end
年中／年末

Internal publication 內部刊物

- Monthly
每月

Charitable activity 公益活動

- As needed
根據需要

Face-to-face meeting/telephone conference 當面會談／電話會談

- As needed/upon request
根據需要／根據請求

Email

電郵聯繫

- Regularly/as needed
定期／根據需要



Villagers/Local Communities 村民／當地社區

Project visit/site visit 項目參觀／現場考察

- Before construction/public open day on the first weekend of every month/upon request
工程施工前／每月第一個週末之公眾開放日／根據請求

Survey

意見調查

- Before construction/as needed
工程施工前／根據需要

Public hearing

公聽會

- Before construction/as needed
工程施工前／根據需要

Charitable activity

公益活動

- As needed
根據需要

About This Report

關於本報告



NGOs 非政府組織

Charitable activity

公益活動

- As needed
根據需要

Site visit

現場考察

- Regularly/as needed
定期/根據需要

Meeting

會議

- As needed
根據需要



Investment Analysts 投資分析員

Project visit/site visit

項目參觀/現場考察

- As needed/upon request
根據需要/根據請求

Meeting

會議

- Semi-annually/as needed
每半年/根據需要

Press release/announcement

新聞稿/公告

- Regularly/as needed
定期/根據需要

Results presentation

業績發佈會

- Semi-annually
每半年

Interim/annual report

中期/年度報告

- Annually
每年



Media 媒體

Project visit/site visit

項目參觀/現場考察

- As needed/upon request
根據需要/根據請求

Press release/announcement

新聞稿/公告

- Regularly/as needed
定期/根據需要

Management interview

管理層採訪

- Regularly/as needed/upon request
定期/根據需要/根據請求

Results presentation

業績發佈會

- Semi-annually
每半年

About This Report 關於本報告

Materiality Assessment

The materiality assessment was conducted in four stages for this Report as follows:

Stage 1: Identification of Sustainability Issues

Everbright Water engaged an independent sustainability consultant to identify and review more than 30 sustainability issues that were most relevant to the Group (please refer to the "List of Sustainability Issues"). These issues were identified from extensive sources of information, including the GRI Standards, SDGs, opinions from the stakeholders, suggestions of the Board and management personnel, internal publications, media information analysis, etc. The purpose was to ensure that the issues identified were fully aligned with the business nature of the Group and relevant to the findings of previous stakeholder engagement exercises.

List of Sustainability Issues

Economic 經濟
<ul style="list-style-type: none"> Economic Performance 經濟績效 Market Presence 市場地位 Indirect Economic Impacts 間接經濟影響 Procurement Practices 採購行為 Anti-Corruption 反貪腐 Anti-Competitive Behaviour 反競爭行為 Technological R&D 技術研發

Environmental 環境
<ul style="list-style-type: none"> Materials Usage 物料使用 Energy Efficiency 能源效益 Usage of Water Resources 水資源消耗 GHG Management and Climate Change Mitigation 溫室氣體管理及氣候變化的應對 Waste Water Treatment 污水處理 Waste Management 廢物管理 Biodiversity 生物多樣性 Suppliers' Environmental Assessment 供應商環境評估 Construction Management 工程施工管理 Environmental Protection Education 環保教育

實質性評估

本報告的實質性評估由以下四個階段組成：

第一階段：識別可持續發展議題

光大水務委聘獨立可持續發展顧問全面識別及檢視超過30項與本集團業務最密切的可持續發展議題（請參考「可持續發展議題列表」）。這些議題乃透過廣泛來源所得，包括 GRI 準則、SDGs、持份者參與意見、董事會及管理層建議、內部刊物及媒體信息分析等，以確保識別出來的議題符合本集團的業務性質，並且與以往與持份者參與活動的結果相關。

可持續發展議題列表

GRI 2-29

GRI 3-1

GRI 3-2

Social 社會	
<ul style="list-style-type: none"> Employee Welfare 員工福利 Occupational Health and Safety 職業健康與安全 Employee Training 員工培訓 Diversity and Equal Opportunity 多元化及平等機會 Internal Communication 內部溝通 Child Labour and Forced Labour 童工與強制勞工 Rights of Indigenous Peoples 原住民權利 Protection of Human Rights and Freedoms 保障人權及自由 Poverty Alleviation 扶貧 Supplier Social Assessment 供應商社會評估 Community Health and Safety 社區健康及安全 	<ul style="list-style-type: none"> Customer Privacy 客戶私隱 Disaster and Emergency Planning and Response 災難及應急預案規劃 Community Participation 社區參與

About This Report 關於本報告

Stage 2: Collection of Stakeholders' Opinions and Establishment of Materiality Matrix

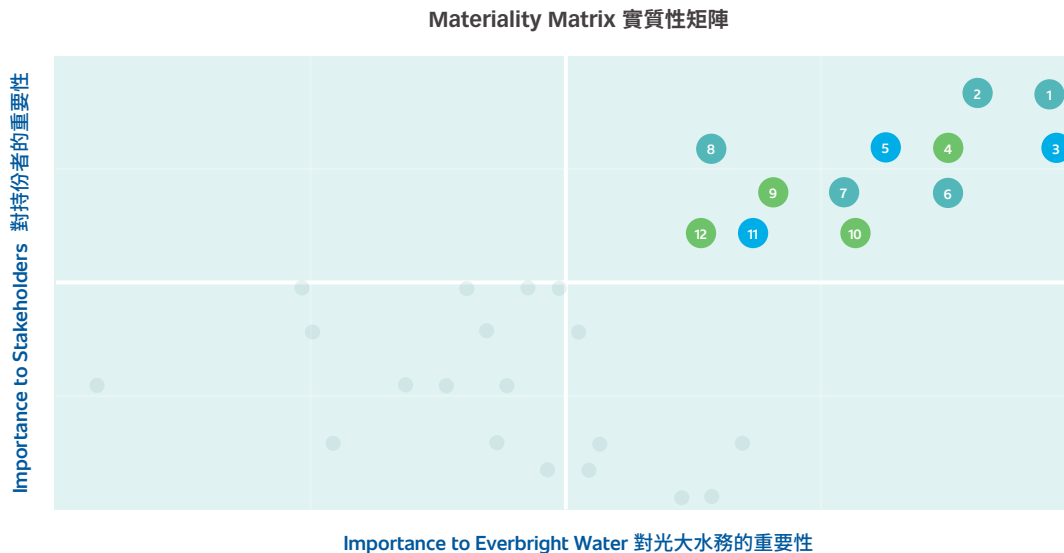
The independent sustainability consultant conducted a stakeholder engagement survey to obtain opinions from nine key stakeholder groups, and based on the survey results, prioritised the sustainable development issues identified in Stage 1. The consultant then conducted a quantitative analysis to formulate a materiality matrix based on the two parameters: perceived importance to stakeholders and significance to Everbright Water's sustainable development. The 12 prioritised material issues that are of the highest importance to the stakeholders and the Group are the disclosure focuses of this Report. The Group's materiality assessment results are shown in the matrix below.

Stage 3: Verification of Material Issues and Data Analysis

第二階段：收集持份者意見，繪製實質性矩陣

獨立可持續發展顧問對九個重點持份者組別進行持份者參與調查，依據調查結果為第一階段識別到的可持續發展議題作優先排序。顧問隨即根據持份者對議題的重要性評分和議題對光大水務可持續發展的重要性這兩個參數，對這些議題的實質性作量化分析，並將分析結果以矩陣形式呈現，從而於兩個層面上討論最為重要的議題。於持份者和本集團層面最為重要的12個經優先排序的實質性議題即為本報告的披露重點。本集團的實質性評估結果如以下矩陣圖所示。

第三階段：驗證實質性議題及數據分析



The Board verified the prioritised material issues and boundaries to ensure the reasonableness, balance and completeness of this Report. Subsequently, the independent sustainability consultant converted the material topics into GRI Standards for reporting. Through a systematic data collection and monitoring mechanism, the specialists from the Group's Operations and Information Management Department ensure that all project companies provide accurate and comprehensive sustainability data on a regular basis.

董事會對經優先排序的實質性議題及其邊界進行驗證，以確保本報告的合理性、平衡性及完整性。隨後，獨立可持續發展顧問將實質性議題轉換為GRI準則，方便報告之用。本集團運營與信息化管理部的專員透過系統性的數據收集和監測機制，確保所有項目公司定期提供準確、全面的可持續發展數據。

About This Report

關於本報告

The material topics covered in this Report, their impacts and boundaries, and their corresponding GRI Standards and SDGs are as follows:

本報告涵蓋的實質性議題、其影響力及範圍、其相應的GRI準則及SDGs如下：

GRI 2-29 GRI 3-1 GRI 3-2

Key Topics/Stakeholder Concerns 主要議題/持份者的關注		Impact and Boundary 影響及範圍								GRI Standards GRI準則	Key Relevant SDGs 主要相關的可持續發展目標	
		Investors/ Shareholders 投資者/股東	Employees 員工	Government 政府	Villagers/Local Communities 村民/當地社區	Customers 客戶	Business Partners/ Suppliers/ 業務夥伴/ 供應商	Investment Analysts 投資分析員	Media 媒體	NGOs 非政府組織		
1	Waste Water Treatment 污水處理	✓	✓	✓	✓	✓	✓		✓	✓	GRI 303 Water and Effluents 水資源與污水	6 CLEAN WATER AND SANITATION 14 LIFE BELOW WATER
2	GHG Management and Climate Change Mitigation 溫室氣體管理及氣候變化的應對	✓	✓	✓	✓	✓	✓	✓	✓	✓	GRI 305 Emissions 排放	13 CLIMATE ACTION
3	Anti-Corruption 反貪腐	✓	✓	✓	✓	✓			✓	✓	GRI 205 Anti-corruption 反貪腐	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
4	Occupational Health and Safety 職業健康與安全	✓	✓	✓			✓		✓		GRI 403 Occupational Health and Safety 職業安全衛生	3 GOOD HEALTH AND WELL-BEING
5	Economic Performance 經濟績效		✓	✓	✓	✓	✓		✓	✓	GRI 201 Economic Performance 經濟績效	8 DECENT WORK AND ECONOMIC GROWTH
6	Waste Management 廢物管理	✓	✓	✓	✓	✓	✓		✓	✓	GRI 306 Waste 廢棄物	15 LIFE ON LAND
7	Usage of Water Resources 水資源使用	✓	✓	✓	✓		✓	✓		✓	GRI 303 Water and Effluents 水資源與污水	6 CLEAN WATER AND SANITATION 14 LIFE BELOW WATER
8	Energy Efficiency 能源效益	✓	✓	✓		✓	✓				GRI 302 Energy 能源	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
9	Disaster and Emergency Planning and Response 災難及應急預案規劃	✓	✓	✓	✓	✓	✓		✓	✓	Not Applicable 不適用	11 SUSTAINABLE CITIES AND COMMUNITIES
10	Employee Training 員工培訓	✓	✓	✓		✓	✓		✓		GRI 404 Training and Education 訓練與教育	4 QUALITY EDUCATION 8 DECENT WORK AND ECONOMIC GROWTH
11	Anti-Competitive Behaviour 反競爭行為	✓		✓		✓					GRI 206 Anti-competitive Behavior 反競爭行為	17 PARTNERSHIPS FOR THE GOALS
12	Child Labour and Forced Labour 童工與強制勞工	✓		✓					✓	✓	GRI 408 Child Labor 童工 GRI 409 Forced or Compulsory Labor 強迫或強制勞動	16 PEACE, JUSTICE AND STRONG INSTITUTIONS

About This Report 關於本報告

Stage 4: Materiality Review

Prior to the preparation of this Report, the Group reviewed the material issues and disclosures in its previous reports, and collected stakeholders' opinions on Everbright Water's sustainability performance during the Reporting Period through stakeholder surveys. All opinions and data collected were reported to the Board, and the Board reviewed and verified the materiality. The materiality review helps stakeholders to fully participate in the sustainable development management and disclosure process, which is also beneficial to the Group in accomplishing long-term sustainable development goals.

第四階段：檢視實質性

在準備本報告之前，本集團對過往報告的實質性議題和披露工作進行了回顧及審閱，並通過持份者參與調查收集持份者對光大水務於報告期內可持續發展表現的意見。所有意見及數據皆會於董事會會議中匯報，並由董事會檢視及核實實質性，以助持份者更全面地參與可持續發展的管理和披露過程，同時有利於本集團實踐長遠的可持續發展目標。

Opinions from Stakeholders 持份者聲音

Average stakeholders' rating for the Sustainability Report 2021 of Everbright Water:

持份者對光大水務二零二一年
可持續發展報告的平均評分：

9.2 (out of 10)
(10分為滿分)

Average stakeholders' rating for the sustainable development performance of Everbright Water in 2022:

持份者對光大水務二零二二年
可持續發展表現的平均評分：

9.1 (out of 10)
(10分為滿分)

100%

of stakeholders agreed that Everbright Water has adequate engagement with them.

的持份者認同光大水務與他們保持足夠的聯繫。

About This Report 關於本報告



Investment Analysts 投資分析員

“Very comprehensive disclosure which covers all material issues.”
「非常全面的披露，涵蓋所有重要物質性議題。」



Government 政府

“Everbright Water has made great efforts in business expansion, is excellent in project operation, and has a wide range of businesses. It has made a positive impact to the society.”

「光大水務的業務拓展力度大，運營項目優良，業務範圍廣泛，對社會帶來良好影響。」



Local Communities 當地社區

“The Company’s operations are safe and stable, which have contributed positively to the local water environment management.”
「光大水務運營安全穩定，為當地的水環境治理，做出了積極的貢獻。」



**WE INCORPORATE
LONG-TERM SUSTAINABLE
DEVELOPMENT STRATEGIES**

AND COMMIT TO BECOMING
A ROLE MODEL
IN WATER INDUSTRY

**採納長遠可持續發展方針，
致力成為水務行業企業模範**



About Everbright Water 關於光大水務

Everbright Water is an environmental protection enterprise focusing on water environment management. It is listed on the Mainboard of SGX and the Main Board of the SEHK (stock codes: U9E.SG & 1857.HK) with its controlling shareholder being Everbright Environment (stock code: 257.HK).



光大水務是以水環境綜合治理業務為主業的環保集團，為新交所及聯交所主板上市公司（股份代號：U9E.SG及1857.HK），其控股股東為光大環境（股份代號：257.HK）。

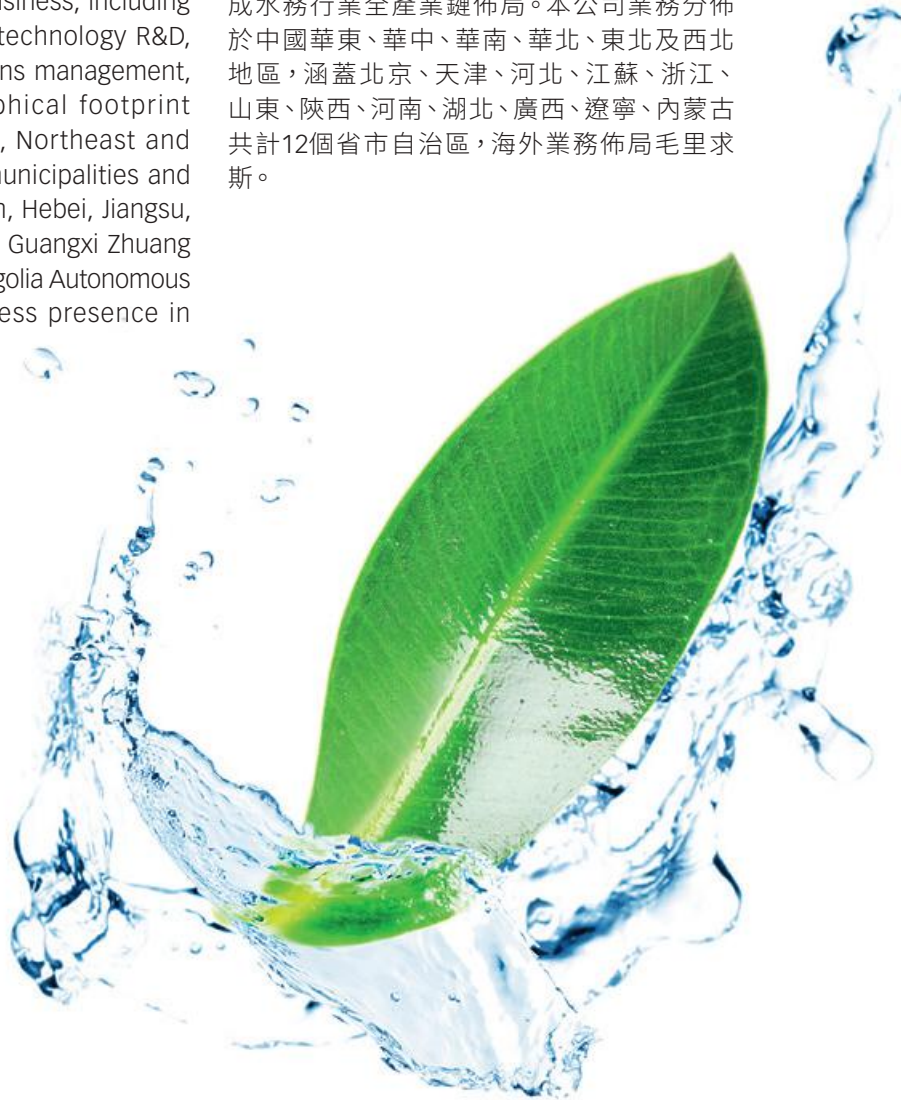


Business Overview

Everbright Water is a leading water environment management service provider in China with diversified and full-fledged business coverage, including raw water protection, water supply, municipal waste water treatment, industrial waste water treatment, reusable water, river-basin ecological restoration, sludge treatment and disposal, etc. The Group has formed a full industry chain in the water business, including project investment, planning and design, technology R&D, engineering and construction, and operations management, among others. The Company's geographical footprint spans across East, Central, South, North, Northeast and Northwest China, covering 12 provinces, municipalities and autonomous regions, namely Beijing, Tianjin, Hebei, Jiangsu, Zhejiang, Shandong, Shaanxi, Henan, Hubei, Guangxi Zhuang Autonomous Region, Liaoning and Inner Mongolia Autonomous Region, in addition to an overseas business presence in Mauritius.

業務概覽

光大水務為中國領先的水環境綜合治理服務商，業務範圍廣泛多元，包括原水保護、供水、市政污水處理、工業廢水處理、中水回用、流域治理、污泥處理處置等全業務範圍覆蓋，精專於項目投資、規劃設計、科技研發、工程建設、運營管理等業務領域，形成水務行業全產業鏈佈局。本公司業務分佈於中國華東、華中、華南、華北、東北及西北地區，涵蓋北京、天津、河北、江蘇、浙江、山東、陝西、河南、湖北、廣西、遼寧、內蒙古共計12個省市自治區，海外業務佈局毛里求斯。



About Everbright Water

關於光大水務

As at 31 December 2022
截至二零二二年十二月三十一日

Total Water Treatment Capacity
水處理總規模

7,248,700

m³/day
立方米/日

Project investment and asset-light projects and services

As at 31 December 2022, Everbright Water invested in and held a total of 161 projects, with a total investment of approximately RMB29.60 billion. In addition, it undertook various asset-light projects and services, such as O&M, EPC and equipment supply, with an aggregate contract value of approximately RMB936 million.

項目投資及輕資產項目與服務

截至二零二二年十二月三十一日，光大水務投資並持有161個水務項目，涉及總投資約296.0億元人民幣；另承接委託運營、EPC、設備供貨等各類輕資產項目與服務，累計合同總額約9.36億元人民幣。



Notes:

附註：

⁽¹⁾ Excluding EPC projects
不含EPC項目

⁽²⁾ Including O&M projects
含委託運營項目

About Everbright Water 關於光大水務

Intelligent Water

In recent years, Everbright Water has devoted itself to improving the information system, promoting digitalised new urban water services, and achieving success in implementing intelligent systems in waste water treatment plants. The Group has published the *China Everbright Water Limited Intelligent Water Whitepaper* to analyse and discuss the application scenarios, technology options, and implementation methods related to "Intelligent Water" in the future. The whitepaper aims to promote the technical and management upgrade of the enterprises and the industry.

Response to the COVID-19 Pandemic

During the COVID-19 pandemic, the Group promptly deployed relevant measures to safeguard the health and safety of its employees and ensure the stable operation of its projects through overall technical and management upgrades. In addition, the Group assisted the local communities to prevent secondary virus transmission through intermediaries such as waste water, and achieved "safe production with compliant discharge".

Business Highlights in 2022

As at 31 December 2022
截至二零二二年十二月三十一日

134 ^{(1), (2)} projects in operation 個運營項目	2 ⁽¹⁾ projects completed construction 個建成完工項目
12 projects under construction 個在建項目	18 projects in preparatory stage 個籌建項目

- Revenue of approximately HK\$6.73 billion, with total assets of approximately HK\$33.45 billion
- Provided its in-house developed technological processes to internal and external clients, which amounted to a total contract value of approximately RMB326 million
- 33 patents granted (including 21 utility models, 6 invention patent and 6 software copyrights) and published 4 technical papers
- The Group's projects treated approximately 1.77 billion m³ waste water and produced approximately 43.63 million m³ reusable water, representing increases of 4.2% and 52.9% respectively compared with 2021

Notes:

- (1) Excluding EPC projects
(2) Including O&M projects

智慧水務

近年來，光大水務致力於信息化建設，推動數字化新型城市水務，並於污水處理廠的智能化建設方面取得一定成效。本集團發佈了《中國光大水務有限公司智慧水務白皮書》，分析和探討未來「智慧水務」主題的應用場景、技術選擇、實施方法等，促進企業乃至行業的整體技術和管理升級。

應對新冠疫情

新冠疫情期間，透過整體技術和管理升級，本集團瞬速地在保障員工的健康安全和項目穩定運營方面作出部署，並致力協助當地社區防止病毒透過污水等廢棄物媒介產生二次傳播，實現「安全生產、達標排放」。

二零二二年業務亮點

- 收入約67.3億港元，總資產約334.5億港元
- 向內外部客戶提供各類自主創新技術工藝包，涉及合同總金額約3.26億元人民幣
- 獲得授權專利33項（包括實用新型專利21項、發明專利6項及軟件著作權6項），發表技術論文4篇
- 旗下各項目共處理污水約17.7億立方米、生產中水約4,363萬立方米，較二零二一年分別增長4.2%和52.9%

附註：

- (1) 不含EPC項目
(2) 含委託運營項目

About Everbright Water

關於光大水務

Business Expansion 業務擴展



During the Reporting Period, Everbright Water invested in and secured 10 projects with an investment of approximately RMB1.309 billion, covering municipal waste water treatment, industrial waste water treatment, reusable water and sludge treatment and disposal, with an increase in the designed daily waste water treatment capacity of 111,000 m³, a daily reusable water supply capacity of 50,000 m³, and a daily sludge treatment capacity of 625 tonnes. In addition, it undertook various asset-light projects and services, such as EPC, O&M, equipment supply and technical services, which commanded a total contract value of approximately RMB595 million. Among which, the newly-undertaken O&M projects contribute a designed daily waste water treatment capacity of 26,500 m³.

報告期內，光大水務投資落實10個項目，涉及投資額約13.09億元人民幣，涵蓋市政污水處理、工業廢水處理、中水回用和污泥處理處置，新增設計規模為日處理污水111,000立方米、日供中水50,000立方米、日處理污泥625噸；另承接各類輕資產項目及服務，涵蓋EPC、委託運營、設備供貨、技術服務等，涉及合同總額約5.95億元人民幣；其中，新承接的委託運營項目新增設計日處理污水規模26,500立方米。

Among them, the Group has obtained the Ji'nan Prior Zone Detonation Area Waste Water Treatment PPP Project in Shandong Province during the Reporting Period, which is another project constructed as an all-underground waste water treatment plant. It not only provided high-quality waste water treatment services for the local area, but also created a pleasant community park for the local community. The securing of the upgrading and expansion project of the industrial waste water treatment plant in Zhangdian East Chemical Industry Park Industrial Waste Water Treatment Project in Zibo, Shandong, and Luozhuang Economic Development Zone Waste Water Treatment Plant and ancillary Pipeline Network Project Phase I in Linyi, Shandong, further deepened the Group's practical experience in environmental management of industrial parks. The implementation of the O&M project of the industrial waste water treatment plant in Jiangsu Yixing Economic Development Zone and the municipal sludge disposal project in Anshan Liaoning demonstrated the positive results of the Group's specialised teams in conducting the relevant industrial research.

其中，本集團於報告期內取得的山東省濟南市先行區引爆區污水處理廠PPP項目為本公司又一個以全地下污水處理廠形式建設的項目，不僅為當地提供優質的污水處理服務，亦為當地社區打造了環境怡人的社區公園。山東淄博張店東部化工區工業廢水處理廠提標擴建項目、山東臨沂羅莊經濟開發區污水處理廠及配套管網項目一期的簽署進一步深化本集團在工業園區環境治理方面的實踐經驗。江蘇宜興經開區工業廢水處理廠委託運營項目以及遼寧鞍山市政污泥處置項目的落實，顯示出本集團依託柔性團隊的相關行產業研究取得積極成效。

The Group's Featured Environmental Protection Businesses 本集團特色環保業務

Sponge City 海綿城市

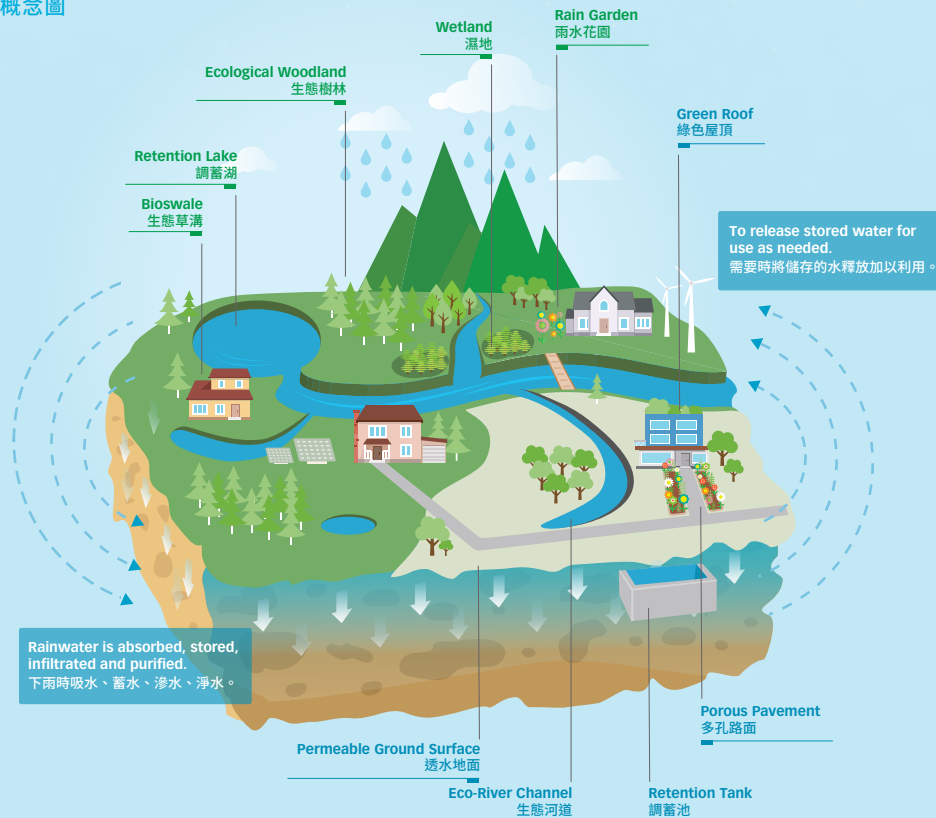
"Sponge city" is a new form of urban rainwater management concept. By simulating the natural water cycle with "adapting to nature with resilience" and the following six principles of integrated flood control management, including "infiltration, stagnation, storage, purification, utilisation and drainage", Sponge City facilitates effective drainage and harvesting of rainwater, strengthens the urban ecosystem and promotes sustainable development. Through enhancing a city's ability in absorption, infiltration, retention, release and purification of rainwater, Sponge City improves the city's resilience against climate change. Sponge City resolves urban waterlogging issue and conserve water resources through restoring the natural water cycle in cities, thus alleviating urban heat island effect and improving the quality of urban living.

「海綿城市」是新一代城市雨洪管理概念，以「順應自然，彈性適應」的方式模擬大自然水循環，遵循「滲、滯、蓄、淨、用、排」六個方針的整合防洪管理，疏導和回用雨水，改善城市生態系統及促進可持續發展。海綿城市旨在透過提升城市對雨水的吸納、蓄滲、緩釋和淨化能力，加強城市對氣候變化的應變能力。海綿城市利用復原城市自然水循環的方法，解決內澇問題及保護水資源，同時緩解熱島效應，提高城市居住品質。

6 Main Functions of Sponge City 海綿城市的六大水務功能

Water security development 水安全建設	Water landscape planning 水景觀規劃	Water environment protection 水環境保護
Water ecological restoration 水生態恢復	Water culture inheritance 水文化傳承	Water economic development 水經濟發展

The concept of "Sponge City" 「海綿城市」概念圖



About Everbright Water

關於光大水務

Putting “Sponge City” Concept into Practice – Zhenjiang Sponge City
Construction Public-Private Partnership (“PPP”) Project
「海綿城市」概念實踐－鎮江海綿城市建設政府和社會資本合作（「PPP」）項目



Zhenjiang Sponge City Construction PPP Project (“**Zhenjiang Sponge City Project**”) is the Group’s key demonstration project to showcase the “Sponge City” concept. Located at the scenic belt of Jinshan Lake of Zhenjiang City, Jiangsu Province, the engineering design of Zhenjiang Sponge City Project emphasises the conservation and enhancement of the local ecosystem through measures such as natural embankments, gentle river banks, and artificial plant landscaping. The ultimate goal is to create a scenic green belt with a series of water retention tanks, rainwater pumping stations, rainwater pipeline networks and waste water treatment facilities, which will greatly improve Zhenjiang’s ability in flood prevention and pollution reduction, and facilitate rainwater utilisation and ecological environment protection.

鎮江海綿城市建設PPP項目（「**鎮江海綿城市項目**」）為本集團旗下的「海綿城市」概念重點示範項目。鎮江海綿城市項目位於江蘇省鎮江市金山湖風光帶，工程設計重點強調通過自然駁岸、緩坡入水、植物造景等生態化手段，保育及美化當地生態環境，建設一條有機的風景綠廊。該項目建立了一系列調蓄池、雨水泵站、雨水管網和污水處理設施，將大幅提升鎮江市的內澇防治的能力並削減污染，促進雨水利用和生態環境保護。

About Everbright Water 關於光大水務

The largest single sub-project in the Zhenjiang Sponge City Project is the Waste Water Overflow Pollution Control Project along Jinshan Lake. This sub-project adopts the combined sewer overflow (CSO) management strategy, with a focus on the control of surface runoff and sewer overflow pollution. The construction mainly lays large-diameter pipelines at the bottom of Jinshan Lake to collect and transport rainwater to waste water treatment plants and wetlands for treatment prior to discharge. Through various measures including water bodies transformation, river bank stabilisation, and wetland restoration, the project has greatly improved the water quality in the city and beautified the landscape, making Zhenjiang a benchmark sponge city that can store water and “breathe”.

鎮江海綿城市項目中的最大單體工程是沿金山湖合流污水溢流污染控制工程，該子項目採用合流制溢流污染綜合治理方案，針對控制地表徑流和溢流污染。工程主要在金山湖底下鋪設大口徑管道，將雨水收集運送到污水處理廠和濕地處理。項目透過改造水體、整治岸坡、復原濕地等多項措施，發揮了滲透、儲蓄和淨化雨水的作用，大大改善城內水質和美化景觀，令鎮江成為能夠蓄水「呼吸」的標杆海綿城市。

Zhenjiang Sponge City Project was shortlisted as Top 5 and received an Honorary Mention in the “Building Back Better Infrastructure Award” of the United Nations Economic Commission for Europe (“**UNECE**”). Additionally, it was regarded as one of the best “People-first” PPP projects and presented at the 5th International PPP Forum of UNECE.

鎮江海綿城市此項目在聯合國歐洲經濟委員會（「**聯合國歐經會**」）「更好重建」基礎設施獎項(Building Back Better Infrastructure Award)評選中躋身五強並榮獲「榮譽提名獎」，亦作為最佳「以人為本」(People-first) PPP項目之一在聯合國歐經會第五屆國際PPP論壇上進行案例展示。

Zhenjiang Sponge City Project also aligns with the “Urban Black and Odourous Water Bodies Management Measures of Jiangsu Province” to integrate the black and odourous water management system into the sponge city design. The combined management approach is essential to the upgrading of the tributaries of Jinshan Lake within Zhenjiang City, and will ultimately purify the city’s water resources.

與此同時，鎮江海綿城市項目亦配合《江蘇省城市黑臭水體整治行動方案》，將黑臭水體整治系統與海綿城市建設進行深度融合，對鎮江市內幾條流入金山湖的黑臭河流進行同步改造，淨化城市水資源。

Project goals 項目目標

Improve Water Quality 改善水質		Improve Drainage 加強排水能力	
Eliminate 91% of pollutants (including ammonia, chemical oxygen demand (“ COD ”), & suspended solids (“ SS ”), etc.) 削減91%的污染物(包括氨氮、化學需氧量(「 COD 」)及懸浮固體(「 懸浮固體 」)等)		Prevent flooding in the city 小雨不積水、大雨不內澇	
Enhance Flood Prevention Capacity 提升防洪能力	Conservation & Revitalisation 活化保育	Embellish Landscape 美化景觀	
Enable withstanding flood that occurs once in 30 years 可有效應對30年一遇洪水	Increase biodiversity and ecological value 增加生物多樣性和提升生態價值	Transform Jinshan Lake into a new landmark in Zhenjiang with clear water 更清澈的金山湖成為鎮江新地標	

About Everbright Water 關於光大水務

Waste Water Treatment 污水處理

Waste water treatment plants generally occupy a large area of developable land, and affect land values and property prices, thereby significantly impacting the development of nearby areas. In order to reduce the impact on land development, many local governments are now prepared to pay higher construction and operating costs for the development of underground wastewater treatment plants. The Group also actively responds to the trend of constructing underground waste water treatment plants, thus becoming an advocate and implementer of ecological civilisation.

污水處理廠普遍佔用大範圍可開發的土地，而且會影響土地和樓盤價格，對周邊土地的開發有重大影響。現時有不少地方政府願意支付較高的建設和運營開支，採用地下式污水處理廠，以減低對土地開發的影響。本集團亦積極響應地下污水處理廠建設的趨勢，成為良好生態文明建設的宣傳者和實行者。



Ji'nan Huashan Waste Water Treatment Project
濟南華山水質淨化項目

Ji'nan Huashan Waste Water Treatment Project is the Group's first fully underground waste water treatment plant, involving a total investment of approximately RMB120 million, a concession period of 30 years, and a designed daily waste water treatment capacity of 30,000 m³ ("**Huashan Project**"). Huashan Project adopts the AAO+MBR process, which mainly treats domestic waste water in Huashan District. The water quality indicators of the treated effluent comply with the Grade 1A standard of *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002), and some indicators implement *Environmental Quality Standards for Surface Water* (GB3838-2002) Class IV standards.

濟南華山水質淨化項目（「華山項目」）為本集團旗下首個全地下污水處理廠，涉及總投資約1.2億元人民幣，特許經營期30年，設計日污水處理規模為30,000立方米。華山項目採用AAO+MBR工藝，主要處理華山片區生活污水，處理後出水水質指標執行《城鎮污水處理廠污染物排放標準》（GB18918-2002）的一級A標準，其中部分指標執行《地表水環境品質標準》（GB3838-2002）IV類標準。

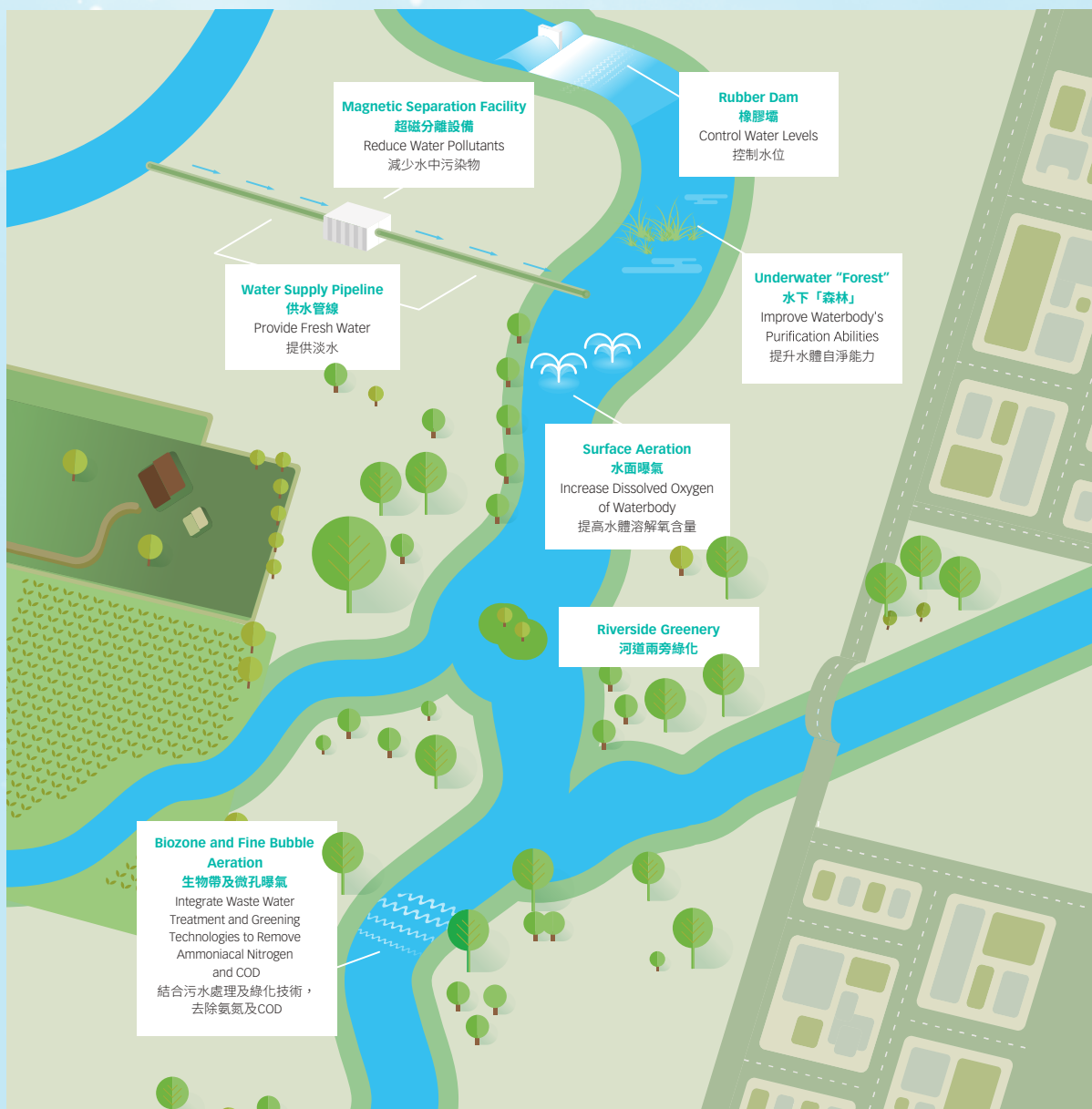
About Everbright Water 關於光大水務

River-Basin Ecological Restoration 流域治理

River-basin ecological restoration refers to the integrated water treatment within the river and land boundary, through artificial restoration measures to greatly improve the flood prevention and stormwater drainage. Moreover, it promotes the aquatic ecological enhancement and builds an aesthetically pleasant, healthy and comprehensive river ecosystem, improving the environment along the river and facilitating subsequent operation and maintenance.

流域治理 (或河道生態治理) 是指在河道陸域控制線內實施綜合整治, 通過人工修復措施大大提升防洪排澇功能, 同時促進河道的水生態發展, 構建美觀、健康和完整的河道水生態系統, 提升沿河環境及後續運營維護。

The concept of River-Basin Ecological Restoration Project 流域治理項目概念圖



About Everbright Water 關於光大水務

River-Basin Ecological Restoration Project 流域治理項目

The Group's first river-basin ecological restoration project is the Nanjing Municipal Water PPP Project, with a total investment of approximately RMB275 million. Another key project of the Group in this area is the Nanning Shuitang River Integrated Restoration PPP Project. These projects strengthen the flood control of cities and increase the local ecological value by improving river water quality, providing river dredging, river widening, transect restoration, river bank greening, and river and discharge point restoration, etc. They also improve the water quality of the Chengnan River Basin in Pukou District, Nanjing City.

本集團首個流域治理項目為南京涉水市政水務PPP項目，總投資約2.75億元人民幣。本集團另一重點流域治理項目為南寧水塘河綜合治理PPP項目。該等項目通過改善河道水質、河道疏浚、河道拓寬、斷面修復、河岸綠化、河道排污點修復等，加強城市防洪和提高當地生態價值，更改善了南京市浦口區城南河流域的水質。

The Group's Nanning Shuitang River Integrated Restoration PPP Project in Guangxi Zhuang Autonomous Region ("**Nanning Shuitang River Project**") was completed and put into operation during the year-in-review. With a total investment of approximately RMB1.466 billion, the project involves emergency engineering (included the waste water interception pipeline engineering), supporting facilities, river ecological restoration, environmental landscape, sponge city construction, river basin dredging, information management engineering, and a waste water treatment plant with a capacity of 40,000 cubic meters per day.

本集團旗下廣西壯族自治區南寧水塘江綜合整治工程PPP項目（「**南寧水塘江項目**」）於報告期內建成投運。該項目涉及總投資約人民幣14.66億元，包含應急工程（含截污管道工程）、配套設施與官網、河道生態修復、環境景觀、海綿城市建設、流域清淤、信息化管理工程，以及一座設計規模為4萬立方米／日的污水處理廠。

Through a series of river basin management measures, Nanning Shuitang River Project has effectively transformed the Shuitang River from a black and ugly water body with complex sources of polluting and unpleasant odours into an urban garden with clear water and green banks. By strengthening water quality monitoring and river inspection, the project realised the timely detection and timely improvement of the river water quality. The waste water treatment plant constructed for Nanning Shuitang River Project adopts the international advanced biological aerated filter technology as the main process. It occupies less land, has a high hydraulic retention time, high pollutant removal rate, flexible and stable operation control, and ensures that the effluent water quality basically meets the national *Environmental Quality Standards for Surface Water Class IV* standard. In addition, Nanning Shuitang River Project introduces international advanced construction concepts, and builds the Shuitang River into a themed riverside park, focusing on water management and science education. On the basis of the functions of urban parks, it added places for popular science, fitness, business, etc. The activity place enables surrounding residents to enjoy a close-to-nature journey that integrates environment, recreation, and popular science.

通過一系列的流域治理措施，南寧水塘江項目切實地將水塘江由污染源複雜、臭味難耐的黑醜水體狀態轉變為清水綠岸的城市後花園。該項目通過加強水質監測、河道巡查等措施，實現了對河道水質情況的及時發現和及時整治。南寧水塘江項目所包含的污水處理廠應用了國際先進的曝氣生物濾池工藝作為主工藝路線，佔地少、水力停留時間段、污染物去除率高、運行控制靈活穩定，確保出水水質基本達到國家《地表水環境質量標準》的IV類標準。此外，南寧水塘江項目引入國際先進的建設理念，將水塘江打造成為專類主題的濱河公園，以水治理和科普教育為主線，在滿足城市公園功能的基礎上，增加科普、健身、商業等活動場所，令周邊居民享受環境、康樂與科普為一體的親近自然之旅。

Raw Water Protection 原水保護

The Group has expanded its business to raw water protection. Amidst the challenges of climate change and increasing water scarcity, the Group is committed to ensuring the quality and safety of water supply sources, as well as protecting precious ecological wetlands and drinking water resources.

本集團已將業務拓展至原水保護領域。面對氣候變化和水資源日趨缺乏的挑戰，本集團致力為供水水源的水質和供給安全提供保障，維護珍貴的水生態環境與飲用水資源。

Located in Zhejiang Province, Zhejiang Tongxiang West Area Drinking Water Sources Protection PPP Project (“**Zhejiang Tongxiang Project**”) is the Group’s first drinking water source wetland protection project, with a total investment of approximately RMB1.253 billion. Zhejiang Tongxiang Project involves investment, construction and operation of water intake pumping stations, raw water pipeline and ecological wetland, including ecological wetland projects, controlled construction, water and soil conservation projects, surrounding water conservancy compensation projects and “Intelligent Water” systems, covering a total construction area of approximately 5,400 mu. Upon completion of construction and commencement of operation, Zhejiang Tongxiang Project will effectively improve the water quality in Tongxiang City, optimise the source of water supply, ensure the safety of drinking water for local residents, and strengthen the resilience of local water treatment plants.

浙江桐鄉西部飲用水源保護建設工程PPP項目（「**浙江桐鄉項目**」）位於浙江省，是本集團首個飲用水源濕地保護項目，總投資額約12.53億元人民幣。浙江桐鄉項目涉及投資、建設和運營新建取水泵站、原水管線工程及生態濕地工程，包括生態濕地工程、控制性建築物、水土涵養工程、周邊水利補償工程和「智慧水務」系統，工程佔地約5,400畝。浙江桐鄉項目建成投運後，將有效提升桐鄉市供水水質，優化取水水源，為居民用水安全提供可靠保障，並增強當地水廠的抗風險能力。



Zhejiang Tongxiang Project
浙江桐鄉項目

About Everbright Water 關於光大水務

Business Outlook

Everbright Water, a company with rich experience in water management, is a pioneer in China's environmental protection industry and is moving towards the goal of becoming a global leading water company. Amidst the gradual saturation of the domestic traditional environmental protection market, coupled with factors such as changes in the international situation, the operating environment of the environmental protection industry will face significant changes. Adhering to the "Dual Carbons" goals and based on the traditional model, Everbright Water will introduce innovation through strategic transformation, and thus expanding its business value and creating more value to the water environment, customers and the enterprise itself.

As one of the important tasks of national ecological civilisation construction and pollution prevention and control, comprehensive water environment management has been elevated to an unprecedented strategic height under the clear requirements of the national "14th Five-Year Plan" for ecological environmental protection and carbon reduction. Everbright Water has extensive experience in water environment management and has become one of the leading companies in the field of water environment management in China. Under "Dual Carbons", Everbright Water will continue to focus on water business as its foundation, and while solidifying its traditional business fields, it will actively explore around the "water-related" concept and actively create value to industries through various "water-related" businesses.

業務前景

光大水務是一家在水務管理領域擁有豐富經驗的公司，是中國環保行業的先鋒，正向全球領先的水務公司邁進。在國內傳統環保市場逐漸飽和疊加國際形勢變化等因素影響下，環保行業的經營環境將面臨重大變革。光大水務以「雙碳」目標為導向，基於傳統模式，通過戰略轉型引入創新，進一步擴大業務價值，為水環境、客戶和企業自身創造更高價值。

在國家「十四五」規劃對生態環境保護及減碳的明確要求下，水環境綜合治理作為國家生態文明建設及污染防控的重要任務之一，已被提升至前所未有的戰略高度。光大水務於水環境治理具有豐富經驗，已成長為中國水環境治理領域的領先企業之一。在「雙碳」背景下，光大水務將堅持以水為基色，鞏固傳統業務領域的同時，積極圍繞「泛水」概念進行探索挖掘，積極推動「泛水」產業鏈的價值創造。



About Everbright Water 關於光大水務

In order to achieve the “Dual Carbons” goal, the Group focuses on three aspects: quality and efficiency improvement, green infrastructure and energy self-sufficiency. In addition, the Group has formulated a series of business development strategies to act in accordance with national strategies and policies, continuously improving economic efficiency under the uncertain external environment. These guidelines include: emphasising the development of national strategic areas, further optimising the allocation of light and heavy assets, enabling innovative technology R&D, accelerating digitisation and “resource-based” construction, and promoting industrial integration with the advantages of its listing status in Singapore and Hong Kong. The Group is confident of overcoming various challenges, further improving the Group’s business strength, seizing opportunities and embarking on the journey of “high-quality development”. Aiming to be a first-class “municipal water environment system development service provider”, the Group strives to contribute “Everbright” strengths to the comprehensive water environment management business.

While adhering to the guidance of “Low Carbon”, the Group will also actively take “pollution reduction and carbon reduction” as an important starting point to promote innovation in business models, technological processes, technology R&D, etc. The Group will realise the promise of “pollution reduction” by developing high-quality water projects and services, and achieve the goal of “carbon reduction” through refined management, technological innovation and other measures. The Group aims to achieve good synergies and improve efficiency through the combination of pollution and carbon reduction, thereby promoting shared and sustainable development with economic, environmental and social benefits.

For details of the Group’s business and prospects, please refer to the 2022 Annual Report.

為實現「雙碳」目標，本集團重點關注三個方面：提質增效、綠色設施和能源自給。此外，本集團制定了一系列業務發展戰略，按照國家戰略和政策行動，不斷提高在不確定的外部環境下的經濟效益。這些指導方針包括：強調開發國家戰略區域、繼續優化輕重資產配置、推動創新技術研發、加快數字化和「資源型」建設、利用新加坡和香港上市公司的優勢促進產業融合。本集團有信心克服各種挑戰，不斷提升本集團的業務實力，抓住機遇，走向「高質量發展」的道路。本集團以成為頂尖的「城市水環境系統開發服務商」為目標，努力為綜合水環境管理業務貢獻「光大」力量。

在堅持「低碳」引領的同時，本集團也將積極以「減污降碳」為重要抓手，推動業務模式、技術工藝、科技研發等方面的創新工作，依託高質量的水務項目和服務，實現「減污」承諾；通過精細化管理、技術工藝創新等措施，達成「降碳」目標；將「減污」與「降碳」相結合，實現「協同增效」，促進經濟、環境和社會效益的共同可持續發展。

有關本集團業務和展望的詳情，請參閱二零二二年度報告。

**WE FOSTER ALL-WIN SITUATION
IN ECONOMIC, SOCIAL AND
ENVIRONMENTAL ASPECTS**

BY CREATING GREEN OPERATION
CONCEPT AND PRACTISING
GREEN MANAGEMENT

**構建綠色經營理念、踐行綠色管理，
取得經濟、社會與環境的共贏局面**



Sustainability Governance 可持續發展管治

The key to ensuring an effective, healthy, and sustainable development of the Group is strengthening its corporate governance. The Company fully implements a comprehensive environment, safety, health, and social responsibility (“**ESHS**”) management system (“**ESHS Management System**”) and risk management system (“**Risk Management System**”) and integrates them into its day-to-day operations and management. Additionally, the Company makes timely and full information disclosure. Such systems are to safeguard the Company’s management structure and to ensure that the core values of its operations are consistent in terms of social responsibility and risk management, thereby providing long-term value for stakeholders and establishing a sustainable future for the Group. In order to maintain its commitment in creating a fair, just society and sustainable environment, the Group incorporates various sustainable developments and social responsibility into its governance structure from the Board at the top to each of the departments and business units at the bottom.

Corporate Governance Structure for Sustainable Development

In order to ensure that the Group’s sustainable development visions and missions are incorporated into its day-to-day management and operations, the Group has established a governance structure for sustainable development and clarified the duties of the board committees (referred to as “**Board Committees**”), departments, and project companies under the supervision of the Board.

加強企業管治是確保本集團能夠高效、健康和可持續發展的基石。本公司透過實施全面的環境、安全、健康及社會責任（「**ESHS**」）管理體系（「**ESHS管理體系**」）和風險管理體系，並與日常經營管理有機結合，以及進行適時全面的信息披露，為本公司的管理架構保駕護航，確保本公司各項業務在社會責任和風險管理方面的核心價值始終如一，致力為持份者創造長遠價值，為本集團建立可持續的未來。為充分展現光大水務對促進公平正義社會與永續環境的承諾，本集團將可持續發展及企業社會責任納入整個集團的企業管治架構，上至董事會層面下至項目層面的部門及各業務單位。

可持續發展管治架構

本集團建立了可持續發展管治架構，明確了在董事會監督下各董事會轄屬委員會（「**董事會委員會**」）、部門以及項目公司的職責，以確保將可持續發展願景及使命融入本集團的日常管理和運營。



Sustainability Governance 可持續發展管治

Highest governance body 最高管治機構

The Board 董事會

Accountable for identifying key stakeholder groups, taking sustainability into account when developing the Group's strategies, and undertaking corporate governance duties, etc.
負責識別關鍵的持份者群體，在制定本集團戰略時考慮可持續性問題，承擔企業管治的責任等。

Report 匯報 ↑ ↓ Delegate 委派

Board Committee/ Management level 董事會委員會/管理層層面

Strategy Committee 戰略委員會

Responsible for assisting the Board in developing strategic direction as well as managing ESG factors that have a significant impact on the Group's business.
負責協助董事會制定本集團的戰略方向，監督對本集團業務有重大影響的ESG因素的實行和管理。

Report 匯報 ↑ ↓ Manage 管理

Management Committee⁽¹⁾ 管理委員會⁽¹⁾

In charge of managing and making decisions about the Group's major social responsibility-related issues.
負責與本集團社會責任相關之重大議題的決策和管理。

Report 匯報 ↑ ↓ Manage 管理

Headquarters functional department level 總部職能部門層面

Operations and Information Management Department/ Safety & Environmental Management Department/ Legal & Risk Management Department 運營與信息化管理部 / 安全與環境管理部 / 法律及風險管理部

Accountable for monitoring the Group's and each project company's performance in sustainable development.
負責監督本集團以及每個項目公司的可持續發展績效。

Report 匯報 ↑ ↓ Manage 管理

Project level 項目層面

Safety & Environmental Management Department/Specialist 安全與環境管理部 / 專員

Every project that is currently under construction or in operation has either Safety & Environmental Management Department or specialist who will be in charge of carrying out the plan for sustainable development and monitoring the project's performance.
所有在建及運營項目均設有 / 委任安全與環境管理部 / 專員，負責落實可持續發展計劃及監督項目的可持續發展表現。

Note:
附註：

- ⁽¹⁾ The Management Committee ceased to function as a Board Committee with effect from August 11, 2021.
管理委員會自二零二一年八月十一日起不再作為董事會委員會。

Sustainability Governance 可持續發展管治

Apart from the departments mentioned above, the Group has established a Management Committee (the “MC”) as its decision-making body for daily operations. The MC is in charge of making decisions and managing significant issues related to the Group's social responsibility. The MC meets at least once per month to discuss the Group's operations and management practices, to advance its efforts toward sustainable development.

Apart from receiving supports from the functional departments at the headquarters, the Group regularly invites external consultants to provide training on popular topics (such as the most recent regulations, economic, environmental and social affairs) to the Directors in order to continuously improve their leadership in the area of sustainability. The Board and senior management of the Company (the “Senior Management”) will review, approve and amend (as and when appropriate) the agendas and policies regarding sustainability on a regular basis, as well as reviewing and approving the sustainability report.

Everbright Water held 5 board meetings during the Reporting Period. All relevant Board Committees and Senior Management reported to the Board for approval on the agendas regarding economic, environmental, and social issues and the consequential impacts, risks, and opportunities to ensure the Group's sustainable development strategy is carried out effectively.

ESHS Management

As a leading corporate in China's water environment management industry, the Group firmly believes that its social responsibility is to maintain a stable and good operations management, in order to guarantee that its goods and services meet the international, national, and local environmental, health, and safety standards and laws. The Group has fully implemented the ESHS Management System since 2016 to improve the level of environmental, health, and safety in its products and services, for the purpose of further integrating system requirements into operational practice. The system focuses on four areas, namely social responsibility, environmental management, safe production management, and management of occupational health. Based on related management systems and experience from both domestic and international sources, the Group strictly complies with all applicable environmental protection, safe production, occupational health, and social responsibility management standards.

除以上管理組織，本集團亦建立了管理委員會（「管理委員會」）作為其日常經營管理的決策機構，負責決策和管理與本集團社會責任相關之重大議題。管理委員會每月至少召開一次會議，以便對當期運營和管理情況進行審議，完善本集團的可持續發展工作。

除了得到總部各職能部門之輔助外，為持續提升董事們在領導可持續發展工作方面的能力，本集團定期邀請外部顧問為董事提供熱門課題（如最新法規、經濟、環境、社會事務）的培訓及資料。董事會和本公司高級管理層（「高級管理層」）會定期檢視本集團的可持續發展議題及政策，適時作出修訂，並審閱及批准可持續發展報告。

於報告期內，光大水務舉行了五次董事會會議。各相關董事會委員會及高級管理層就經濟、環境和社會議題向董事會作出匯報，並由董事會審議相關議題為本集團帶來的影響、風險和機遇，以確保本集團的可持續發展策略得以落實。

ESHS管理

本集團作為中國水環境綜合治理的龍頭環保企業，深信維持穩定和良好的企業運營管理是企業應盡之責，確保旗下產品和服務符合相關國際、國家和地方的環境及健康安全標準及法規。為進一步把制度要求融入運營實踐中，本集團於二零一六年起全面實施ESHS管理體系，提升其產品和服務的環境及健康安全水平。該體系針對環境管理、安全生產管理、職業健康管理、社會責任管理四個部分，根據國際、國內相關的管理體系和經驗，確保本集團嚴格遵守所有相關環境保護、安全生產、職業健康與社會責任的法規和標準。

Sustainability Governance 可持續發展管治

Such system regulates the internal management and risk control in all different processes and implements the sustainable environmental development and safety culture and policies at all levels, including all its employees, on-site third-party contractors and subcontractors. Besides, the system also minimises the Group projects' impact on the native population, the local environment, public safety, and society.

該體系規範各個環節的內部管理及風險管控，將可持續的環境發展與安全文化和政策延伸到本集團各級部門和各個層面，包括旗下所有員工及駐場第三方承包商及分包商。該體系亦同時保障本集團項目對所在地原住民以及當地環境、安全、健康和社會方面的影響降至最低。



In order to identify and eliminate occupational hazards and risks as soon as possible, the Group has developed the *ESHs Audit Management Standard* which is to implement the ESHs Management System at the project companies, audit the ESHs performance and determine whether it is necessary to perform corrective and preventative actions of the project company on site. The Group conducts an internal on-site ESHs audit for all its projects that are currently under construction or in operation on an annual basis.

為盡早識別和消除職業危害及風險，本集團制定了《ESHs審核管理標準》，於項目公司實施ESHs管理體系，審核項目公司在ESHs方面的表現，並確認是否需要對項目公司現場的ESHs表現採取預防及整改措施。本集團旗下所有在建及運營項目每年均會進行一次內部ESHs現場審核。

Sustainability Governance 可持續發展管治

Everbright Water (Ji'nan) Co., Ltd. (“**Everbright Water Ji'nan**”), has integrated the ESHS Management System, the standard operating procedures (“**SOP**”) under the Risk Management System (“**SOP Risk Management System**”), Version I Quality, Environment, Occupational Health and Safety Integrated Management System to improve safety and productivity. This innovative integrated management method, which focuses on three primary aspects namely safety work implementation, equipment maintenance acceptance, and production ledger record inspection, and therefore, complying with all applicable standards and norms.

Business Principles

The Group has formulated prudent policies and procedures to support and maintain an ethical culture. The Group's *Code of Conduct* outlines specific expectations for employee behaviour, covering topics like equal opportunities, anti-discrimination, bribery and corruption prevention, extortion prevention, anti-fraud and anti-money laundering and safeguarding employee benefits and treatment. All employees must comply with the stringent requirements under such code, act ethically, and uphold honesty and integrity in business operations.

Prevention of Corruption and Anti-Competitive Behaviour

Everbright Water has formulated the *Guidelines for Management of Conflicts of Interest*, which clearly sets out the possible scenarios for business-related conflicts of interest. Additionally, such guidelines also provide the division of labour, preventative techniques, accountability mechanisms for conflicts of interest management, in particular the prohibition of monetisation. The Group strictly prohibits all forms of bribery and all other unethical inducements and payments, for example, payments for facilitation. All staff members must also refrain from any actions that might put their personal interests in conflict with the Group's business.

其中光大水務(濟南)有限公司(「**光大水務濟南**」)把ESHS管理體系、通過標準化操作流程(「**SOP**」)的風險管理體系(「**SOP風險管理體系**」)及I版質量、環境、職業健康安全一體化管理體系結合,務求將安全與生產緊密結合,提高工作效率。該創新合併管理方式,針對安全工作落實、設備保養驗收和生產台賬記錄檢查三個主要方面,符合相關的標準和規範。

營商原則

本集團制定了審慎的政策和措施,推廣及維持誠信文化。本集團的《行為守則》為員工的行為提供清晰指引,包括平等機會、反歧視、防止賄賂、防止勒索、反欺詐及反洗錢,以及保障員工待遇和福利等議題。本集團要求所有員工嚴格遵守該守則,在業務運作中秉承誠信與務實的管理方針並堅持道德操守。

防止貪腐及反競爭行為

光大水務制定了《利益衝突管理指引》,除了清晰列出業務相關的潛在利益衝突情況,還釐定了利益衝突的管理分工、防範策略和問責制度,尤其禁止疏通款項。本集團禁止賄賂或任何形式的不道德誘因或付款,包括疏通費。所有員工亦須避免任何可能導致與本集團業務產生利益衝突的活動。

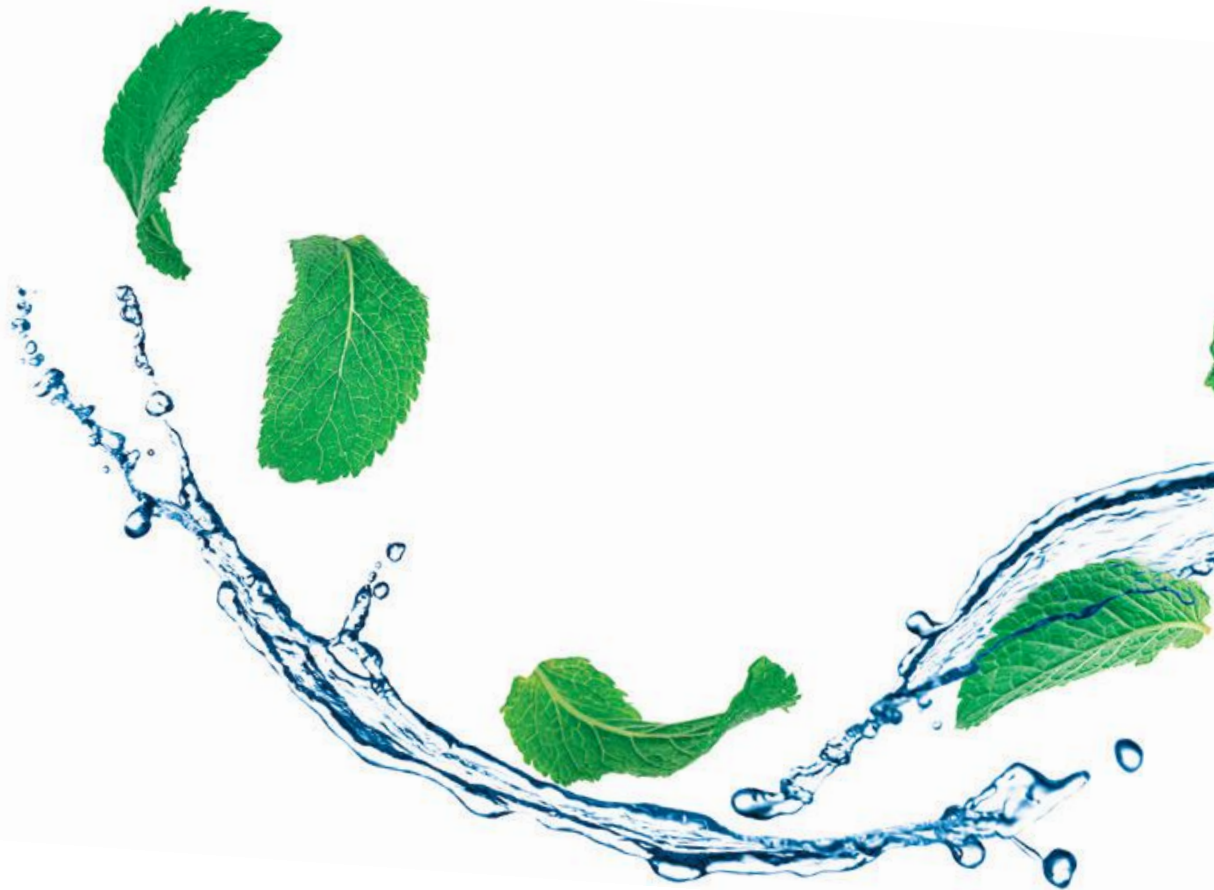
Sustainability Governance 可持續發展管治

The Group provided a total of 913 hours of anti-corruption training for its Directors and employees during the Reporting Period in order to strengthen anti-corruption practices and employees' awareness of conflicts of interest and integrity issues. Such trainings were participated by the Group's executives, middle-level management, and other employees. The training materials were prepared based on various resources like *Sending Integrity to the Door* and *Twenty Regulations on Building a Clean Government* in order to fulfill its responsibility of building a clean government. The Group actively cultivates and promotes an integrity-based culture, implements anti-corruption governance at all levels of the business, and aims to lower corruption risks. Apart from encouraging anti-corruption and integrity culture among its employee, the Group also communicates its anti-corruption policy to all business partners, and requires them to comply with the relevant laws and regulations and conduct business ethically.

The Group forbids entering into any agreement that hinders, restricts, or distorts competition. This includes preventing rivals from collaborating with each other on crucial aspects of competition (like price, output, or bidding methods) in order to harm industry competition. The Group also forbids any abuse of authority power to harm competition in order to protect customers' freedom of choice.

為加強反貪腐實踐與員工對利益衝突及誠信事宜的警覺性，本集團於報告期內為董事及員工提供合共913小時防止貪腐的培訓，參與培訓的人員包括本集團高管、中層及其他各層級員工，培訓內容基於《送廉上門》及《廉政建設二十條規定》等學習材料，切實履行廉政建設的責任。本集團積極培養和促進誠信文化，在各業務層面貫徹反貪腐的管治，致力減低貪腐風險。除了向所有光大水務的員工推廣反貪腐及廉潔文化外，本集團亦對所有商業夥伴溝通本集團的反貪腐政策，要求商業夥伴謹遵相關法規，誠信經營。

本集團禁止訂立任何妨礙、限制或扭曲競爭的安排，包括阻止競爭對手就關鍵的競爭元素（例如價格、產量或投標的方式）進行串通而損害行業競爭。同時，本集團禁止任何濫用權勢損害競爭的行為，確保不會限制客戶的選擇。



Sustainability Governance 可持續發展管治

Protection of Third-Party Privacy and Intellectual Property

The Group is dedicated to protecting third parties' privacy. The *Privacy Policy* of the Group outlines the scope, standards and procedures for suppliers and employees to follow while managing third-party privacy and data. To ensure that all parties respect intellectual property rights, the policy also contains mechanisms to prevent copyright infringement. Employees must also adhere to all relevant laws and rules regarding the collection, storing, processing, disclosure, and use of personal data, as required by the Group. The Group regularly evaluates the privacy risks associated with its operations and evaluates whether the current measures to safeguard personal information are sufficient. The Group will react swiftly in accordance with the data security incident procedures upon identification of any potential personal privacy and data security risk to ensure that personal data is protected against any unauthorised access or use. The Group's Legal and Risk Management Department will examine any instances of copyright infringement and offer legal advice.

Regular Review System and Whistleblowing Policy

The Group has set up a regular review system to examine hidden risks of ethical and professional integrity violations every year, conduct internal investigations, hold those responsible for various violations accountable, analyse and evaluate the effectiveness of the system's implementation, and offer rectification actions, thereby steadily improving the level of its corporate management.

保護第三方私隱及知識產權

本集團矢志保護第三方的個人私隱。本集團的《私隱政策》清楚列明員工及供應商在處理第三方私隱及資料時的範圍、標準及程序。此外，該政策亦包含了防止侵犯版權的條款，務求各方尊重知識產權。本集團亦要求員工遵守有關收集、保管、處理、披露及使用個人資料的適用法律規定。本集團定期評估業務的私隱風險，並衡量保障個人私隱的控制措施是否充足。當發現涉及個人私隱和資料安全的風險，本集團將迅速按照資料安全事故程序作出應對，確保在未經許可的條件下，個人資料免受進一步存取或使用。如涉及侵犯版權的事故，本集團的法律及風險管理部將審視事故並提供法律意見。

定期檢討制度及舉報政策

本集團建立了定期檢討制度，每年檢視違反道德和職業操守行為的隱患，對各種違規行為進行內部調查並予以追責；分析評估制度執行的有效性並提出整改意見，穩步提升企業管理水平。



Sustainability Governance 可持續發展管治

The Group has established an email address to receive any whistleblowing reports, which provides a channel for the employees to report any irregularities directly to the chairman of the Audit Committee. Whistleblowers can also get in touch with the Company's Chief Executive Officer ("CEO") directly by email, which is listed on the website of the Company. In order to ensure that the whistleblower can actively defend the Company's ethical standards without any concerns, the Group's reporting channel is operating 24/7, and employees are encouraged to report anonymously. The Group will not reveal the identity of the whistleblower without the whistleblower's consent or without a court order. Employees can anonymously report any misbehaviour, failure to perform duties, or irregularities involving the Group while being certain that they will not face retaliation. The Group will ensure that a fair and independent inquiry is properly set up and that any complaints or violations brought up by workers are regarded as confidential information. The Group did not receive any verified reports through reporting channels during the Reporting Period.

本集團設立了接收舉報的電子郵箱，旨在提供正式舉報渠道，讓員工可以直接聯繫審計委員會主席。舉報人也可通過本公司總裁（「總裁」）的電子郵箱（已在本公司網站上公佈）取得直接聯繫。本集團的舉報渠道全天候運作，並鼓勵員工匿名舉報，在未經舉報者同意或無法律要求下不會透露舉報者身份，以確保舉報者能在沒有後顧之憂的前提下積極捍衛本公司的道德標準，並保障所有員工的合法權益。員工可在保密情況下舉報與本集團有關的任何不當、失職及違規行為，同時確保員工毋須畏懼報復。員工提出的所有關注事項或違規行為都將被視為保密信息，本集團將確保妥善安排公平獨立的調查並作出適當跟進。於報告期內，本集團未通過舉報渠道收到任何查證屬實的報告。



Whistleblowing Channels 舉報方式

Chairman of the Audit Committee 審核委員會主席
ac@ebwater.com

CEO 總裁
ceo@ebwater.com

Biodiversity and Land Use Policy

Everbright Water acknowledges that the development of new projects may damage the habitats of many animals and plants. Therefore, its environmental management strategy focuses on reducing impacts on biodiversity. The Group is dedicated to fostering biodiversity and conducting careful assessments of nearby natural habitats and extremely sensitive ecological areas in order to fully protect the area's ecological environment.

生物多樣性與土地利用政策

光大水務知悉興建新項目會對土地及野生動植物棲息地造成干擾，因此本集團的環境管理方針亦重點包含減輕對生物多樣性的影響。本集團致力推廣生物多樣性，謹慎評估項目附近的自然棲息地及高度生態敏感地區，力求充分保護項目鄰近區域的生態環境。

Sustainability Governance 可持續發展管治

The Group will adhere to legal processes to make sure that the environmental impact assessment report and approval, land use certificate, construction permit, and other required papers have been duly obtained. Additionally, the Group will conduct a preliminary social assessment of the development project as early as possible in the early stages of the project, evaluate the needs of various groups including affected households, indigenous people, vulnerable groups, etc., implement pertinent measures, and work to protect and identify the groups affected by the project. Those who are affected by the project will also receive additional support on top of the compensation from the local government.

本集團在動工興建新項目設施前，均會按照法定程序，確保已取得環境影響評估報告及批覆、土地使用證、施工許可證等文件後才開始施工。此外，為保障及識別受項目影響的群體，本集團會在項目初期盡早對開發項目進行初步社會評價，評估各群體如受影響戶、原住民、弱勢群體等的需要，實施相應措施，致力於提供當地政府要求的補償，亦為受項目影響的群體提供額外支援。

The Group has created a *Biodiversity and Land Use Policy* in order to ensure that the following protection measures and design principles are adopted during project development:

本集團已制定《生物多樣性與土地利用政策》，確保於項目發展時採取以下保護措施及設計原則：

Ecological Environmental Protection Measures 生態環境保護措施

- ◆ To minimise damage to vegetation areas, try to avoid constructing project facilities in areas such as nature reserves, ecological function areas, forest parks, and dense forest areas.
盡量避免在自然保護區、生態功能區、森林公園和密集林區等區段興建項目設施，減少對植被區的破壞。
- ◆ To minimise soil disturbance and harm to surface vegetation, make reasonable planning for the permanent land occupation of water supply and waste water pipeline networks.
對供水及污水管網永久佔地進行合理規劃，以減少土壤擾動和破壞地表植被。
- ◆ To prevent damage to the vegetation adjacent to the road, strictly monitor the on-site construction operation equipment, clearly define the range of activities, and forbid driving and operation anywhere other than the road station.
如有施工作業，嚴格管理現場施工作業設備，劃定活動範圍，不得在道路站場以外的地方行駛和作業，保障路外植被不被破壞。
- ◆ To increase staff awareness on environmental protection, and ensure protection for species under national key protection as an important task.
加強工作人員的環保意識，對國家重點保護的物種列入工程建設中的重要工作事項。
- ◆ If there is construction work, try to restore the original land use pattern after the work is finished and implement greening strategies like climate-appropriate trees and grass planting.
如有施工作業，盡量於施工結束後恢復原有土地利用格局，並根據氣候條件採取種樹種草等綠化措施。

Sustainability Governance

可持續發展管治

Biodiversity Conservation 生物多樣性保護

Protect wild plants

保護野生植物

- To avoid deforestation of wild plants (particularly the highly important nature protection areas) and cause damage to the ecological environment in the areas along the route.

避免對野生植物濫砍濫伐(尤其要高度重視自然保護區段)而造成沿線地區的生態環境破壞。

Protect wild animals

保護野生動物

- To promote the protection of wild animals, vigorously publicise the role of amphibians, reptiles and birds in the ecosystem, and prohibit construction workers from harming any wild animals.

推廣保護野生動物，大力宣傳兩棲、爬行動物、鳥類對生態系統的作用，禁止施工人員危害任何野生動物。

Environmental protection

環境保護

- To strengthen the protection of the water environment, avoid pollution or eutrophication of local waters along the construction line, and minimise the impact on aquatic organisms and their habitats.

加強水環境保護，避免施工作業沿線局部水域發生污染或富營養化，把對水生生物及其棲息環境的影響減至最低。

Education on protection

保護意識教育

- To strengthen public education on wildlife protection and ecological environmental protection.

強化教育公眾的野生動物保護意識和生態環境保護意識。

Indigenous Peoples Resettlement 原住民安置

- Where appropriate, priority will be given to employing people affected by the project to ensure their livelihoods.

在合適情況下，優先聘請受項目影響的人士，使其生計得到保障。

- To incorporate social management clauses into construction contracts to ensure full compliance by contractors.

將社會管理條款納入施工合同，確保承包商完全遵守。

- To avoid bidding on projects located in socially sensitive areas.

避免投標位於社會敏感區域的項目。

- To provide adequate compensation to indigenous peoples whose rights and interests are adversely affected by the implementation of projects, in accordance with relevant national and local policies.

根據國家及當地有關政策要求，對因項目實施權益受到傷害的原住民，進行相應補償(賠償)。

Risk Management

The Group attaches great importance to risk management, and has actively established a systematic, standardised and efficient Risk Management System, and continuously improves and strengthens its internal control. The Group adopts preventive measures against the risks brought by its investments and operations based on environmental, social, and governance factors in order to reduce the potential impact of risks on the business.

The Group has established an efficient risk management structure. It is to prevent risks at source through establishing the three lines of defence for risk management comprising project companies, functional departments at the headquarters, and the Internal Audit Department. The Group has also established special committees like the Risk Assessment Committee, the Technology Committee, and the Procurement Management Committee to strengthen the specialised review and effectiveness of the progress on critical issues.

In addition, the Group carries out annual risk assessments to identify, control and regulate various types of risks. As an environmental enterprise which is closely connected with the water cycle, the Group recognises that climate change could bring significant risks to its business. Therefore, the Group is devoted to identifying relevant climate change risks and opportunities at all levels of its business, which include areas such as extreme weather, policy changes, environmental compliance, technology and innovation. Regular reviews and updates are also carried out. The Group is committed to mitigating, adapting to and combating the negative impacts of climate change on its business.

風險管理

本集團高度重視風險管理，積極建立系統、規範、高效的風險管理體系和內部監控系統，不斷完善與提升其內部控制。本集團將風險管控框架納入預防原則，基於環境、社會和管治因素對本集團投資及運營帶來的風險採取預防性措施，以減低風險對業務造成的潛在衝擊。

本集團建立了高效的風險管理架構，並透過項目公司、總部各職能部門、內審部的三道風險控制防線，致力從源頭防範風險。本集團亦設立了風險評審委員會、技術委員會、採購委員會等專項委員會，強化了對於重點事項的專業審核及有效推進。

此外，本集團堅持每年進行風險評估，以便識別及管控本集團所面臨的各類風險。另外，作為與水循環密切相關的環境從業者，本集團深知氣候變化可能對業務構成重大風險。因此，本集團致力於在所有業務層面識別相關的氣候變化風險與機遇（其中包括極端天氣、政策改變、環境合規、科技與創新等範疇），並會定期作出檢視與更新。本集團承諾以行動減緩，適應及抗禦氣候變化對業務所帶來的負面影響。

Sustainability Governance 可持續發展管治

For details of the Group's corporate governance, risk management and internal control, please refer to the 2022 Annual Report.

Supply Chain Management

Everbright Water views local suppliers as its important partners and cooperates with them in a fair and open manner. This facilitates the development of local communities in all provinces, municipalities, and autonomous regions (the "Provinces") in China. The Group prioritises suppliers in the same Province when developing business all over the country in order to create employment opportunities for local communities and fulfill corporate social responsibility. Preference is also given to environmentally- and socially responsible suppliers, such as contractors who prioritise the purchase of reusable and renewable products or adopt low-emission construction processes, etc. This is to encourage the supplier to put sustainability into practice.

As at 31 December 2022, the Group engaged a total 4,814 suppliers for projects, most of which were based in mainland China⁽¹⁾. The principal services provided by these suppliers included equipment fitting, installation and construction. The Group outsourced services such as environmental monitoring, equipment maintenance, cleaning, security, and landscaping, involving 3,392 on-site outsourced workers.

有關本集團的企業管治、風險管理及內部控制的詳情，請參閱二零二二年度報告。

供應鏈管理

光大水務視本地供應商為重要夥伴，堅持以公平、開放的方式與各供應商合作，促進中國各省、直轄市及自治區（「省份」）的當地發展。本集團於全國各地發展業務時，會優先選用位於同省份的供應商合作，為當地創造就業機會，履行企業社會責任；亦會盡可能選擇承擔環境及社會責任的供應商，例如優先選購可重用或再生產品、聘任採用低排放建設過程的承包商等，以鼓勵供應商支持可持續發展。

截至二零二二年十二月三十一日，與本集團建立合作關係的項目供應商共有4,814家，大部分供應商均位於中國內地⁽¹⁾，主要服務包括設備配置、安裝與工程建設。本集團的外判服務包括環境監測、設備維修、清潔、保安和綠化等，共涉及3,392名駐場外判工人。

Note:

⁽¹⁾ The suppliers of Mauritius St. Martin Waste Water Treatment Plant O&M Project were excluded.

附註：

⁽¹⁾ 不包括毛里求斯聖馬丁污水處理廠委託運營項目的供應商。

Sustainability Governance
可持續發展管治

As of 31 December 2022
截至二零二二年十二月三十一日

Number of Suppliers for Projects by Geographical Region
按地區劃分的項目供應商數目

Mainland China
中國內地

4,813

Overseas
海外

1

Total
總數
4,814

Number of On-site Outsourced Workers in 2022
二零二二年駐場外判工人數目

Environmental Monitoring
環境監測

285

Equipment Maintenance
設備維修

1,281

Cleaning
清潔

198

Others
其他

603

Security
保安

154

Landscaping
綠化

396

Catering
食堂

127

Construction Workers
建築工人

348

Total
總數
3,392

Sustainability Governance 可持續發展管治

Supplier Management Measures

The Group is devoted to exerting a positive influence on the supply chain. The Group regularly communicates with suppliers and delivers messages regarding sustainability to all stakeholders to ensure sustainable development values are integrated into the supply chain. To identify and minimise the environmental and social risks in the supply chain, the Group has formulated and implemented a series of supplier management guidelines and integrated the environmental and social management into all processes of the supply chain:

供應商管理準則

本集團持續與供應商進行溝通，向供應鏈中各持份者傳達可持續發展的信息，以確保本集團將可持續發展宗旨融入到供應鏈中，促進供應鏈發揮正面影響。為了識別並降低供應鏈中的環境與社會風險，本集團特別制定並落實以下供應商管理準則，在供應鏈的各個流程中落實環境與社會管理：

Code of Conduct for Suppliers 《供應商行為準則》

- ◆ To regulate the behaviours of suppliers in the economic, environmental and social aspects in a systematic way, in order to encourage suppliers to fulfill and jointly improve the sustainability performance of the supply chain. Such Code of Conduct also encourages the Group's suppliers to treat their subordinate suppliers with the same standards, so as to enhance the sustainability of the entire supply chain.

系統性規範供應商在經濟、環境及社會領域的行為，旨在鼓勵供應商履行並共同提高供應鏈的可持續發展表現。該行為準則更鼓勵本集團的供應商以相同的標準對待他們的從屬供應商，以提升供應鏈的整體可持續發展水平。
- ◆ In terms of economic and governance aspects, suppliers are required to carry out and operate businesses with ethics and integrity, and to comply with relevant local, national and international laws and regulations. As for environmental aspect, suppliers are required to minimise the negative impacts on the environment during their operations and strengthen monitoring of environmental issues. In terms of social aspect, suppliers are required to comply with the relevant national labour policies and legislations, which include prevention of slavery, forced and bonded labour, child labour and abusive employment practices. Suppliers are also obliged to safeguard human rights of their employees and take due considerations of public welfare.

在經濟和管治層面，要求供應商進行商業活動時需要從道德角度出發，誠信經營，並遵守當地及國際的相關法律；在環境層面，要求供應商在其運營中加大監控力度，盡量減少對環境的污染及負面影響；在社會層面，要求供應商遵守該國家的勞工政策和法規，當中包括禁止任何奴役、強迫勞動、抵押勞工、使用童工或虐待行為，維護員工的基本人權，並考慮公眾利益。
- ◆ In terms of employee treatment, suppliers must provide employees with a suitable living environment, set a minimum living wage and maximum working hours to protect the well-being of employees; suppliers must also establish a good working environment for employees, protect employees from discrimination and ensure that the health and safety of employees are fully guaranteed.

在員工待遇方面，規定供應商須為員工提供適宜居住環境，設立最低生活工資及最高工時，以保障員工福祉；供應商亦須為員工建立良好的工作環境，保護員工免受歧視，並確保員工的健康和安全得到全面保障。
- ◆ All suppliers shall comply with such Code of Conduct during their course of business with the Group or participation in any events related to the Group.

所有供應商在與本集團進行業務往來或參與任何與本集團有關的活動時都應遵守該行為準則。

Supplier Management Measures**《供應商管理辦法》**

- Covers various topics such as the responsibilities of various suppliers on equipment, main materials, construction units, design units and operation centres, ranking and evaluation of suppliers, engagement of new suppliers, ongoing management of suppliers, management of unqualified suppliers, and disciplinary actions on misconduct.

涵蓋裝備、主材料、施工單位、設計單位、運營中心等供應商之職責分工、供應商等級及評價、新供應商的顧用、供應商動態管理、不合格供應商的管理和違規處罰等事宜的詳細規定和要求。
- Suppliers are categorised into four grades, namely A, B, C, and D based on the continuous evaluation of their professional level, financial status and compliance records. Business relationships may be terminated if the suppliers with the lowest grade fail to prove that they are capable of fulfilling the Group's requirements.

按照供應商的專業水平、財務狀況及合規記錄等對現有供應商進行持續評估，將供應商劃分為A、B、C、D四個等級，最低等級的供應商若無法證明其能夠達到本集團的要求，本集團或會終止與其合作。

Contractors ESHS Management Measures**《承包商ESHS管理標準》**

- Aims to identify and control the environmental, social and safety risks during outsourcing by examining the contractors from the aspects of background, qualification, construction operation and environmental protection performances.

旨在透過審視承包商的公司背景、資質、業績、安全生產及環保等各方面的綜合表現，藉此辨識、監督並有效管控其環境、社會和安全相關的風險。
- Contractors need to fill in the *Contractor ESHS Questionnaire* and provide relevant ESHS information to assist the Group in compiling the list of qualified contractors and ensuring that the suppliers and contractors comply with environmental and social responsibility management regulations, as well as any applicable national and local government regulations.

承包商需要填寫「承包商ESHS問卷調查表」，提供ESHS相關資料，以協助本集團整理合格承包商名單，並確保供應商和承包商遵守環境和社會責任的管理條例和法規，以及適用的國家和地方政府規定。
- The information required to be submitted includes whether the contractor has any certificate for international environmental management standard certification such as ISO 14001, whether it has conducted ESHS training and assessment, and whether it has provided appropriate protective equipment for employees.

要求提交的信息包括承包商是否擁有ISO 14001等國際環境管理標準認證、是否進行ESHS培訓與考核、是否為員工提供適當的保護裝備等。

Sustainability Governance 可持續發展管治

The Group provides further guidance to its business partners to enhance their sustainability performance by issuing various policies and guidelines, including *Tender Management Measures* and *Management Measures for Appraisal Expert Database of Project Construction Procurement*.

Supplier Sustainability Risk Assessment

In line with the global trend of sustainable development, the Group emphasises on its fulfilment of corporate social responsibility as well as extending the strategy of sustainable development to its supply chain. In order to deepen the understanding of risks in the supply chain, the Group commissioned an independent consultant to carry out an assessment on its suppliers' sustainability risks and ESHS performance. In 2022, a total of approximately 102 suppliers, whose businesses cover electrical equipment, pumping equipment and water treatment equipment, etc., participated in the survey and assessment. The scope of the assessment includes the qualifications of suppliers in terms of production, operation, and safety, etc., as well as their management systems related to quality, environment and society, etc.

The Group's effectiveness in sustainable supply chain management has been fully reflected in the results of the sustainability risk assessment. None of the assessed suppliers indicated that they were involved in any ongoing commercial litigation, nor being prosecuted or fined by the relevant authorities on environmental and social issues. Most assessed suppliers were applying for or had already obtained international certification for management standards including ISO 9001, ISO 14001, and ISO 45001, etc.; 50% of surveyed suppliers had formulated occupational health and safety policies and provided relevant training for employees. None of the surveyed suppliers indicated that they had any safety accident in the past three years. The Group has not identified any risks related to child labour or forced labour in the supply chain in the recent risk assessment.

本集團的《招標管理辦法》及《工程建設採購評審專家庫管理辦法》等相關制度亦進一步引領業務夥伴提升其可持續發展表現。

供應商可持續風險評估

在目前全球可持續發展的大趨勢下，本集團不僅強調企業自身不懈履行社會責任，更重視將可持續發展的策略擴展至企業的供應鏈。為加深了解供應鏈內的風險，本集團委託了獨立顧問為本集團的供應商評估其可持續性風險及ESHS方面的表現。於二零二二年，本集團邀請了約102家主要供應商接受評估。供應商的業務範圍包括電力設備、泵類設備及水處理設備等。評估涵蓋了供應商生產、經營及安全方面的資質，以及質量、環境和社會方面的管理體系等。

本次的可持續風險評估結果充分反映本集團在可持續供應鏈管理中的成效。被評估的所有供應商均表示企業現時沒有因環境和社會問題引發的商業訴訟正在進行中，也未被有關部門就環境和社會問題作出檢控或罰款。另外，大部分被評估的供應商均正在申請或已擁有了ISO 9001、ISO 14001及ISO 45001等國際認證；當中50%的受訪供應商訂立了職業健康及安全政策，並為員工提供相關培訓活動；所有受訪供應商均表示在過去三年沒有發生過任何安全事故。在該次風險評估中，本集團未有辨識到在供應鏈中任何與童工或強制勞動相關的風險。

Sustainability Governance 可持續發展管治

The Group has commissioned an independent consultant and its internal ESHS management team to identify and assess the environmental and social risks of its suppliers through materiality assessment, and to determine the sustainability risks at each stage of the supply chain. The team identified and reviewed each supplier's sustainability risk factors and issues, including environmental performance, quality management, occupational health and safety, employee training, human rights policies, etc. Through collection and analysis of the data provided by the suppliers, the Group identified the most significant risk factors and issues. The Group categorised suppliers' risks into low, medium, and high levels according to the assessment results to determine their ESG performance.. In this assessment, 78.43% of surveyed suppliers were classified into low-risk category, and the rest were in medium-risk category. No suppliers fell into high-risk category. In order to assist the suppliers with relatively higher risks to improve their management, the Group actively investigated their situations and provided recommendations to ensure their risks could be effectively controlled. In the future, the Group will continue to monitor the performance of suppliers and keep close communication with each other to maintain the sustainability of the supply chain.

本集團委託獨立顧問及內部的ESHS管理團隊，透過實質性評估來識別及評定供應商的環境及社會風險，以識別供應鏈每個環節的可持續風險。團隊識別及檢視本集團各個供應商的可持續發展風險因素及議題，如環境表現、質量管理、職業健康與安全、員工培訓、人權政策等。本集團收集並分析供應商所提供的資料數據，從而識別最具重要性的風險因素及議題。本集團參考評估結果，將供應商的風險分為低、中、高三個等級，以檢視供應商在環境、社會及管治的績效。在是次評估中，78.43%的受訪供應商屬於低風險，其餘均屬於中風險，沒有供應商落入高風險的類別。為了協助較高風險供應商改善其管理，本集團積極探討情況並提出建議，確保其風險可被有效控制。本集團未來將會持續監察供應商的表現，與各方保持緊密溝通，確保供應鏈的可持續性。



**WE UNDERTAKE ENVIRONMENTAL
RESPONSIBILITY, PROTECT
OUR LUCID WATER AND BLUE SKY,
AND FOSTER HARMONIOUS
DEVELOPMENT IN THE SOCIETY**

**履行環保責任，保護碧水藍天，
促進社會的共融發展**



Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

With a sensible global vision, the Group at all times embraces the corporate objective of “Creating Better Investment Value and Undertaking More Social Responsibilities”. The Group pays close attention to the sustainable development of various stakeholders and the society as a whole. Climate change is the primary risk threatening the world today. It is also the most important sustainable development issue for the Group and its stakeholders. In order to enhance the transparency and accuracy of information disclosure, the Group makes climate-related disclosures to stakeholders including investors and fund providers by preparing this Report in accordance with the framework of the Task Force on Climate-related Financial Disclosure (“TCFD”). This is also to facilitate the stakeholders in tackling climate change.

About TCFD Reporting Framework

TCFD covers four key areas for disclosure: governance, strategy, risk management, metrics and targets.

本集團秉持敏銳的全球視野，時刻謹守「創造更好投資價值、承擔更多社會責任」的企業追求，密切關注各持份者及社會整體的可持續發展。氣候變化是當下威脅全球的首要風險，亦是本集團及持份者最為重視的可持續發展議題。本集團按照氣候相關財務信息披露工作組（「TCFD」）的框架編寫本報告，向包括投資者及資金提供者在內的持份者披露氣候相關風險信息，務求加強信息透明度及確實性，協助各界應對氣候變化。

關於TCFD報告框架

TCFD涵蓋四個信息披露重點，包括：管治、策略、風險管理、指標和目標。



Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Governance

Everbright Water has incorporated the governance of sustainable development into its corporate governance structure. While paying close attention to the risks and opportunities related to climate change, the Group continuously improves its agenda, so as to implement climate risk response goals and strategies with a united attitude and from top to down.

Responsibilities of Board and Committees

The Board is the highest governance body of the Group and is the highest leading unit. Assisted by the Strategy Committee, the Board prudently evaluates the Group's core concerns such as climate change risks, water environment governance, and corporate social responsibility and formulates relevant strategic guidelines, operational goals, and development directions. The Board also embodied the highest supervisory role to ensure that the Management can accurately achieve its goals and implement sustainable development.

The Board has established the Audit Committee (the "AC"), which supervises and guides the promotion of the Group's climate change-related strategies. The AC is responsible for reviewing the adequacy and effectiveness of various systems within the Group, maintaining close communication with the Board, and implementing the Group's sustainable development management direction. The AC reviews the two major governance systems, namely Risk Management System and ESHS Management System on an annual basis and evaluates the effectiveness of the operational, compliance and continuous risk management and as such, the AC plays an important role in maintaining the Group's climate risk management. At the same time, the Group has also established the Risk Assessment Committee to assist the MC in assessing the potential risks of new investment projects. The Risk Assessment Committee is responsible for reviewing new investment projects and making recommendations based on risk assessment results to assist the MC in making final investment decisions.

治理

可持續發展是光大水務業管架構的重要管治理念。本集團持續關注氣候變化的相關風險與機遇，同時不斷完善其議程，以上下一心的態度積極落實氣候風險的應對目標與策略。

董事會及委員會之職責

在本集團管治架構中，董事會為最高領導單位，任重道遠。在戰略委員會的協助下，董事會審慎評估氣候變化風險、水環境治理、企業社會責任等本集團核心關注議題，從而制定相關的戰略方針、運營目標及發展方向。董事會亦擔當了最高的監督角色，務求管理層能夠確切實現目標，落實可持續發展。

董事會設立了審計委員會（「審計委員會」），著意指導和監察本集團氣候變化相關策略的落實狀況。審計委員會的主要職責是審閱本集團內部的充分性和有效性，同時與董事會保持緊密溝通，貫徹實踐本集團的可持續發展管制理念。審計委員會按年審閱風險管理體系和ESHS管理體系兩大主要管治體系，針對當中的運營性、合規性和持續性風險管理效能作出評估，對本集團的氣候風險管理有重要的推動作用。與此同時，本集團亦設立了風險評審委員會，協助本集團的管理委員會評估新投資項目的潛在風險。風險評審委員會負責審閱新投資項目，並按風險評估結果提供建議，完善管理委員會的最終投資決定。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Responsibilities of Headquarters' Functional Departments

Functional Departments

- Responsible for overseeing the sustainability performance of the Group and each project company

Legal and Risk Management Department under Everbright Water

- Responsible for 1) summarising the risk management results of various departments and regional management centres; 2) assessing the potential major risks according to the metrics listed in Group's risk management plan; and 3) formulating and implementing updated risk management plans for coming years.

Operations and Information Management Department, the Safety & Environmental Management Department under Everbright Water

- Responsible for daily operations management to ensure that the project operations are in compliance with the national and the Group's requirements. Additionally, these departments are responsible for supervising project companies such that the sustainable development strategy goals formulated by the Group could be effectively implemented.

Responsibilities of Project Managers

In order to carry out comprehensive internal management and risk control, the Group manages all levels of the business units strictly in accordance with the Risk Management System and ESHS Management System. All construction and operation projects of the Group are supervised by their corresponding safety and environmental management specialists. This ensures maximum efficiency and professionalism for each and every project while complying with the safety and environmental requirements.

These project managers fully understand the Group's sustainable development concept and implementation plan, while all the front-line staff possessing rich experience in supervising and managing the projects. Their good understanding of the actual safety and environmental conditions of each project enables them to optimise the treatment processes of various water resources in different projects. Since the organisational structure has been designed to promote two-way communication between the Management and execution teams, the Group as a whole is able to promote green, low-carbon and efficient operations at the project level to address potential risks brought by climate change.

總部相關職能部門之職責

職能部門

- 負責監督本集團及旗下項目公司的可持續發展績效

光大水務轄下法律及風險管理部

- 負責1)統整各部門和區域管理中心的風險管理成果；2)按照本集團的風險管理計劃進行比照，評估本集團面臨的重大潛在風險；及3)更新、完善和制定來年的風險管理計劃。

光大水務轄下運營與信息化管理部、安全與環境管理部

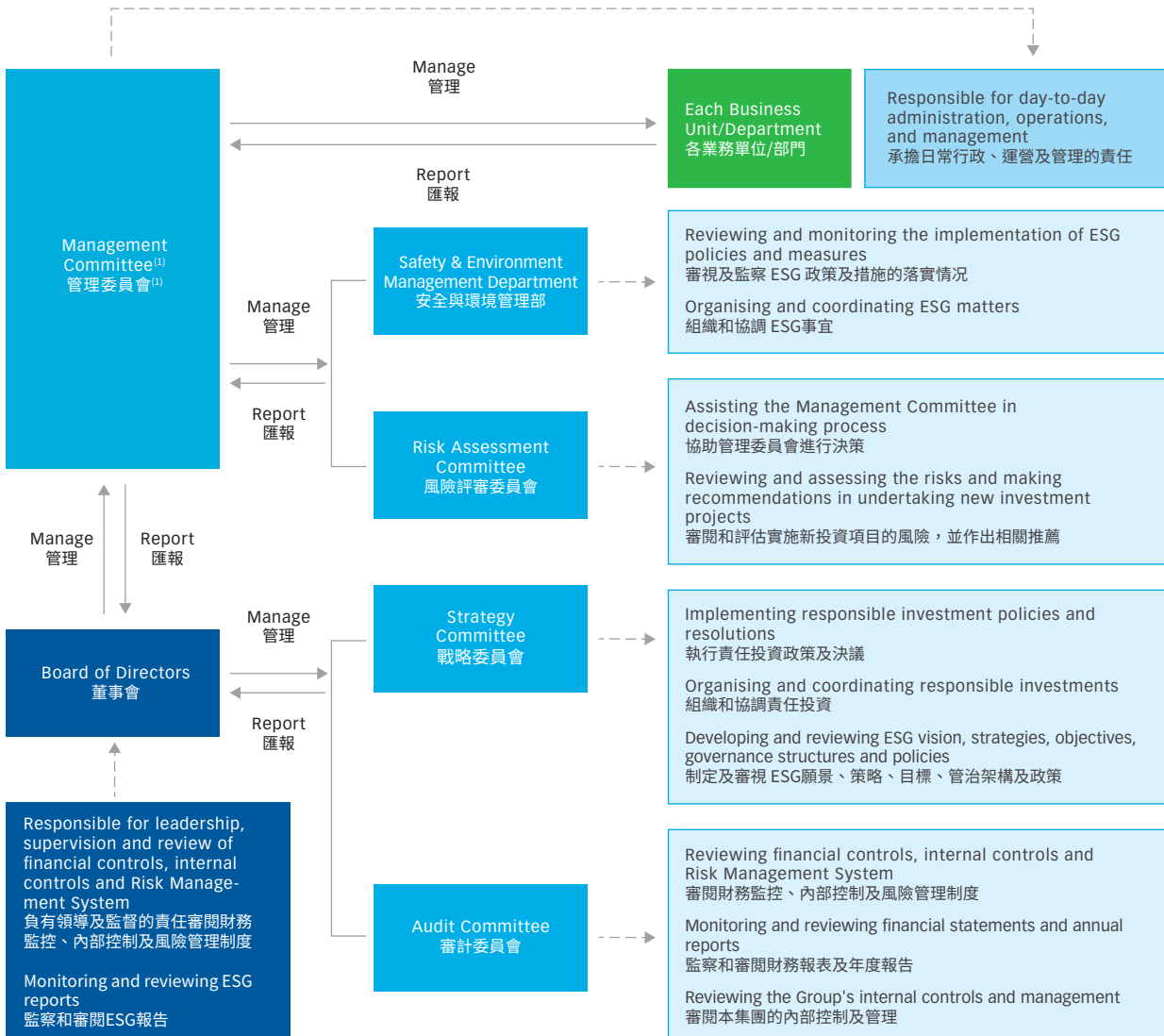
- 負責日常業務運營管理，確保項目運營符合國家和本集團規定。此外，這些部門也負責監督工作，確保項目公司能有效落實本集團所定製可持續發展策略目標。

項目管理人員之職責

為進行全面而完善的內部管理和風險管控，本集團嚴格按照風險管理體系和ESHS管理體系管理各個層級的工作。本集團的所有建設和運營項目均由對應的安全與環境管理專員負責，確保每個項目都能夠在合乎安全及環境要求的前提下達到最大效率和專業性。

這些項目管理人員明瞭本集團的可持續發展理念及執行計劃，而一線人員亦有豐富的負責監督項目的經驗，充分了解各項目的安全及環境的實際情況；因此，能夠優化各個水資源項目的處理流程。有賴上下一致的管治架構，本集團得以從項目層面推動綠色低碳的高效運營，以應對氣候變化帶來的潛在風險。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略



Note:

附註：

⁽¹⁾ The Management Committee has ceased to be a Board Committee with effect from 11 August 2021.

⁽¹⁾ 管理委員會自二零二一年八月十一日起不再作為董事會委員會。

For additional details on the Group's sustainable development governance, please refer to the chapter entitled "Sustainability Governance" of this Report.

本報告的「可持續發展管治」章節另有詳述本集團的可持續發展管治。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Strategy

Everbright Water acknowledges that climate change will bring various risks to its business and therefore, it has been taking active and prudent steps in formulating corresponding strategies. The Group's physical risks are mainly in the area of water resources management, including water stress, natural disasters such as floods and droughts, and other extreme weather such as extreme precipitation events, extreme temperatures, etc. Other changes are categorised into transition risks, including policy changes, reputation shifts, technological expansion/phase-out, etc. These risks may negatively affect the assets and supply chains and cause negative financial impacts. The Group is committed to reducing and offsetting GHG emissions, and enhancing the resilience of the Group and its projects in response to climate change in order to build a cleaner water environment.

At the same time, Everbright Water embraces the opportunities brought by climate change and is determined to promote the sustainable development of the city as a whole through its response to climate change. Therefore, Everbright Water has established and implemented a series of strategies to deal with climate risks, re-positioning the Group in the ever-changing world, in order to enhance the city's climate change resilience and promote sustainable development. The Group has adopted the following three strategies to achieve the goal of carbon neutrality in a more active manner:

策略

光大水務深明氣候變化所帶來的多種風險，因此一直採取審慎積極的態度制定應對策略。本集團業務所面臨的實體風險主要與水資源治理相關，包括：水資源壓力、洪水乾旱等天然災害、其他極端天氣如極端降水事件、極端氣溫等；其他變因則與轉型風險相關，包括：政策改動、聲譽轉移、科技擴展／淘汰等。這些風險或對資產及供應鏈造成負面壓力，構成潛在的財務影響。因此，本集團致力抵銷和降低溫室氣體排放，同時強化本集團及其旗下項目對氣候變化的應變能力，以建設更清潔的水環境。

與此同時，光大水務亦充分認知氣候變化所帶來的機遇，銳意藉著氣候變化的應對工作來推動城市整體的可持續發展。因此，本集團制定和落實了一系列應對氣候風險的策略，旨在身處持續變化的世界中仍能保持清晰定位。本集團採取了以下三大策略，並致力以更進取的姿態實現碳中和的目標：



Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Understanding Climate Risks Through Climate Scenarios Analysis

Climate scenarios refer to the future climate conditions at different levels of greenhouse gas emissions. To align with the global climate change governance and gain an in-depth understanding of the significant climate risks faced by the Group, the Group has created climate scenarios simulations with reference to internationally recognised guidelines. In accordance with the TCFD framework, climate risks are divided into two categories, namely, physical risks and transition risks. Climate scenario analysis helps the Group to assess the impact of future climate change trends specifically by measuring and estimating its potential threats to various assets (such as projects under preparation, construction, commissioning and operation). The risk calculations enable the Group to make better-informed decisions, so as to reduce the business vulnerabilities while seizing various emerging opportunities in the context of climate change.

Physical Scenarios

According to the *Sixth Assessment Report ("AR6")* on climate change published by IPCC in 2021, the Group also considers a combination of "Shared Socioeconomic Pathways" ("SSP") and "Representative Concentration Pathways" ("RCP") to assess the current climate state (applicable to water resource stress assessment) and the climate change scenario in 2040. The comparative analysis identifies acute and chronic climate risks faced by the Group. Considering the majority of projects are operated under a concession for approximately 20 to 30 years, the selection of 2040 as the future assessment year is considered appropriate.

透過「氣候情境分析」管理氣候相關風險

氣候情境是指在不同程度的溫室氣體排放情境下對未來氣候條件的描述。為了深入了解本集團所面對的重大氣候風險並跟隨全球氣候變化治理的步伐，本集團參照國際認可之指引對氣候情境進行模擬，遵從TCFD框架把氣候風險分作兩大類，包括：實體風險和轉型風險。氣候情境分析將有助本集團評估未來氣候變化趨勢帶來的影響，具體量度並估計其對各類資產（如在籌備、建設、投產和運營的項目）的潛在風險。通過風險計算，本集團能藉此未雨綢繆，減低氣候變化對業務的影響，同時把握各種新機遇。

實體情境

本集團根據IPCC於二零二一年公佈的氣候變遷《第六次評估報告》（「AR6」），同時考量「共享社會經濟路徑」（Shared Socioeconomic Pathways，簡稱「SSP」）與「代表濃度途徑」（Representative Concentration Pathways，簡稱「RCP」）評估當前氣候狀態（適用於水資源壓力評估）和二零四零年的氣候變化情境，然後進行分析比較，從而辨析本集團所面對的急性和慢性氣候風險。另外，考慮到大多數項目的特許經營年期約介乎20至30年之間，故本集團選用了二零四零年作為未來評估之年份。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Physical Scenarios¹

實體情境¹

Physical Risk 實體風險	Scenario 情境	Scenario Simulation 模擬情境
Water Stress ² 水資源壓力 ²	Current State 當前狀態	Simulating a scenario in the absence of climate anomalies: use the ordinary least squares method to calculate the state of water resource stress from 1960 to 2014, and estimate the current risk of water resource stress. 模擬沒有氣候異常的情境：使用普通最小平方方法，計算一九六零年至二零一四年的水資源壓力狀態，並以此推算現時的水資源壓力風險。
	SSP2 RCP4.5 (Optimistic Scenario) SSP2 RCP4.5 (樂觀情境)	Simulating the scenario of stable economic development: 模擬經濟穩定發展的情境： Carbon emissions will peak and decline by 2040. Before 2100, carbon dioxide equivalent (“CO _{2e} ”) emissions must be limited to about 650 ppm, and temperatures should be maintained between 1.1°C and 2.6 °C. 碳排放量將於二零四零年前達到峰值並下降。而在二零一零年之前，二氧化碳當量（「二氧化碳當量」）排放量必須限制在約650 ppm，溫度應保持在攝氏1.1至2.6度之間。
	SSP2 RCP8.5 (Business-as-Usual) SSP2 RCP8.5 (如常運作)	Simulating the scenario of stable economic development and stable growth of global carbon emissions: 模擬經濟發展穩定、全球碳排放穩定增長的情境： The concentration of carbon dioxide equivalent will reach about 1,370 ppm before 2100; and compared with 1986 to 2005, the global average temperature will increase 2.6°C to 4.8°C. 二氧化碳當量濃度將於二零一零年前達到約1,370 ppm；而相對於一九八六年至二零零五年，全球的平均溫度將會上升攝氏2.6至4.8度。
Coastal Flood Risk ³ 沿海洪水風險 ³	SSP2-4.5	Simulating the climate scenario for medium emission pathway: 模擬中間路徑的氣候情境： Greenhouse gas emissions peak and decline around 2040, and by 2100, global temperatures will be about 2.7°C above pre-industrial levels. 溫室氣體排放量大約在二零四零年達到峰值並下降，而到達二零一零年時，全球氣溫將比工業化前高出約攝氏2.7度。 This simulated scenario is in general consistent with the total emission reductions pledged by countries in the 2015 <i>Paris Agreement</i> . 此模擬情境與二零一五年《巴黎協定》中各國所承諾的總減排量大致相符。
	SSP5-8.5	Simulating climate scenarios for high emissions pathways: 模擬高排放路徑的氣候情境： Greenhouse gas emissions would increase rapidly within this century and will double by 2050; global temperatures will be about 4.4°C higher than that of the pre-industrial levels. 溫室氣體排放量在本世紀內迅速增加，並於二零五零年達到雙倍排放量；全球氣溫將比工業化前高出約攝氏4.4度。

Notes:

- ¹ The descriptions of various scenarios refer to the technical manual – *Guidance on Scenario Analysis for Non-Financial Companies* published by TCFD in 2020.
- ² The description of the scenario simulation for the water stress assessment referred to the technical note document of the Aqueduct Water Risk Assessment Tool developed by the World Resources Institute.
- ³ The description of the scenario simulation for coastal flood risk assessment referred to Coastal Risk Screening Tool published by Climate Central and the IPCC AR6 report.
- ⁴ ppm means parts per million.

附註：

- ¹ 各種情境的描述均參考TCFD在二零二零年發佈的技術手冊—《非金融公司情境分析指南》。
- ² 水資源壓力評估的模擬情境描述參考世界資源研究所所開發的Aqueduct水風險評估工具的技術說明文件。
- ³ 沿海洪水風險評估的模擬情境描述參考氣候中心(Climate Central)的沿海洪水風險篩檢工具說明及IPCC AR6報告。
- ⁴ ppm指百萬分之一。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Transition Scenarios

To analyse the various transitional climate risks that the Group are facing and, formulate and implement the corresponding management policies, the Group has adopted the climate change scenarios in the *World Energy Outlook 2022* report released by the International Energy Agency for the purpose of the Group's development. In addition, this Report adopts the recommendations of TCFD's *Guidance on Scenario Analysis for Non-Financial Companies* and adopts a 1.5°C scenario, which is in line with IPCC's latest scientific research, and the growing momentum of pledges to ensure net-zero emissions by 2050. This Report adopts the "Net Zero Emissions by 2050 Scenario" from the *World Energy Outlook 2022* report to represent a not more than 1.5°C warming scenario, and the "Stated Policies Scenario" is used to represent a future climate change scenario based on a projection of the prevailing policy measures.

轉型情境

為了分析本集團正面臨的各種轉型氣候風險及該實施的管理方針，本集團的評估參考並採用了國際能源署發佈的《二零二二年世界能源展望》報告中的氣候變化情境，以促進本集團發展。此外，本報告採納TCFD《非金融公司情境分析指南》的建議，採用一個攝氏1.5度情境。此情境符合IPCC最新的科學研究，同時亦能反映全球多國承諾在二零五零年達到淨零排放的國際趨勢。本報告採用《二零二二年世界能源展望》報告中的「二零五零淨零排放情境」以代表全球增溫不多於攝氏1.5度的情境，並採用「既定政策情境」代表根據現行政策措施推算的未來氣候變化情境。

Transition Scenarios

轉型情境

Scenario 情境	Scenario Simulation 模擬情境
Net Zero Emissions by 2050 Scenario 二零五零淨零排放情境	CO ₂ emissions will fall to 23 Gt by 2030 and to zero in 2050, which is consistent with limiting the temperature increase to less than 1.5°C in 2100. In 2030, the spending on clean energy and infrastructure will triple together with an increase in the investments in emerging market and developing economies. 到二零三零年，二氧化碳排放量將降至230億噸，並到二零五零年降至零。這一軌跡與二一零零年將溫度升幅限制在攝氏1.5度以下一致。到二零三零年，清潔能源和基礎設施支出將增至三倍，而新興市場和發展中經濟體的投資亦會增加。
Stated Policies Scenario 既定政策情境	Based on prevailing policy measures, the increase in global energy demand of around 1% per year will be met entirely by renewable energy by 2030. Emerging market and developing economies will experience increase in terms of the varieties of fuels and technologies, while all of the net increase in energy demand will be met by low-carbon sources. Energy-related CO ₂ emissions will reach a plateau at around 37 Gt before falling slowly to 32 Gt in 2050, which will lead to a 2.5°C rise in global average temperatures by 2100. 根據現行政策措施，到二零三零年，全球能源需求每年增長約1%將有機會全部由可再生能源滿足。新興市場和發展中經濟體將在更廣泛的燃料和技術方面實現增長，而幾乎所有發達經濟的淨增加能源需求均由低碳的排放源補足。與能源相關的二氧化碳排放量將達到約370億噸的平穩期，然後在二零五零年緩慢下降到320億噸，並將導致二一零零年的全球平均氣溫升幅達至攝氏2.5度。

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Promoting the Development of Renewable Energy

Following the implementation of the "Dual Carbon" goals in the "14th Five-Year Plan", the Group continues paying close attention to the sustainable development of the water-environment treatment industry. In addition to prudently handling water resources, the Group also highly values energy conservation and emission reduction. Therefore, the Group has included "Promotion of Renewable Energy" to be part of its corporate governance strategy, hoping to reduce greenhouse gas emissions from the source and covering all aspects of its operations.

The Group advocates the following concepts of green operation: waste-to-energy, materials optimisation and localisation. To promote "light-water complementarity", Everbright Water installed photovoltaic power generation facilities in the factory, and flexibly utilised water treatment by-products such as effluent and sludge produced in the waste water treatment process to reduce the use of traditional fossil energy. These measures complement each others and able to supply electricity to the factory, thereby reducing the consumption of non-renewable energy.

In addition, the Group has also established an in-plant photovoltaic specialised team to enhance the capability of its team by doing policy study, research and exchange, and project pilots. By systematically promoting the implementation of photovoltaic projects in waste water treatment plants, and conducting continuous reflection and evaluation of operational optimisation based on industry experience, Everbright Water is able to use renewable energy whenever possible and reduce unnecessary consumption of non-renewable resources during the construction and operation phases as well as explore innovative and effective energy-saving solutions to align with social needs and national policies.

推動發展可再生能源

緊隨著「十四五」規劃中的「雙碳」目標落地推進，本集團持續關注項目運營以至整個水環境治理行業的可持續發展。除了慎重處理水資源，本集團亦十分重視節能減排。因此，本集團已將「推動可再生能源」加入本集團治理策略，希望從各個經營環節入手，並從源頭減少溫室氣體排放。

本集團倡導綠色運營的理念，貫徹了轉廢為能、物盡其用、因地制宜等理念。在「光水互補」的理念下，光大水務在廠內設置了光伏發電設施，亦靈活運用了污水處理過程產生的廠出水、污泥等副產物，以減少使用傳統化石能源。這些措施多元互補，有的更能直接為廠內供電，減少消耗非再生能源。

除此以外，本集團亦成立了廠內光伏專項小組，務求通過政策學習、調研交流、項目試點等強化本集團的專業團隊；通過系統推進光伏項目在污水處理廠的落地實施並結合同業經驗進行持續的運營優化反思評估，光大水務得以在建設和運營期間盡可能利用可再生能源，減少不必要的不可再生資源消耗，同時探索更多創新有效的節能方案，貼合社會需求和國家政策。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

In-plant Solar Photovoltaic

Given that waste water treatment industry consumes large amount of energy, photovoltaic power generation facilities at the waste water treatment plants can help achieve “pollution and carbon reduction”. The installation of photovoltaic power generation facilities makes good use of large area of water treatment plant. Additionally, the physics covering function of photovoltaic inhibits the growth of algae and therefore, meeting existing operational needs for proper covering. In addition, photovoltaic power generation facilities could provide multiple advantages such as an extended land use duration, low chance of operation interruption and good investment stability.

In the first half of 2021, the Group’s Shandong Zibo Waste Water Treatment Project (Plant 1) in Shandong Province set up a 1.82 MW distributed pilot photovoltaic project in the plant. As the Group’s first pilot project, the annual power generation capacity of this facility is 1.9 million kilowatt-hours (kWh), which can satisfy about 9% of the project’s power consumption. It is expected to save 40,000 tonnes of CO₂e and 7.8 tonnes of NO_x per year during the 25-year project cycle. Immediately thereafter, the Group also carried out an in-plant photovoltaic pilot project in its Tianjin Beitang Waste Water Treatment Project (“**Beitang Project**”). The capacity of the Beitang Project is 5.74MW, with the annual power generation of 6.8 million kilowatt-hours (kWh), which can satisfy about 10-20% of the power consumption of the plant. The Beitang Project also introduced green technologies such as water-sourced air-conditioning systems to further optimise the effect of emission reduction. Looking ahead, Everbright Water will continue seeking more room for carbon reduction and actively implement more pilot projects.

廠內光伏

鑑於污水處理屬於高耗能產業，光伏發電設施有助配合污水處理廠實現「減污降碳」，一方面妥善利用大面積的水處理池安裝光伏發電設施，另一方面藉著光伏的物理覆蓋功能抑制藻類生長，符合設施本身的加蓋需求。另外，光伏發電設施具備多重優點，如土地使用年限長之餘、停運機會低和投資穩定性良好等。

因此，本集團於二零二一年在山東淄博污水處理項目搭建起1.82 MW的分佈式光伏發電設施。作為本集團的首個試點，該設施的年發電量為190萬千瓦時(kWh)，可滿足約9%的廠區用電，預計在25年的項目週期內每年可節約CO₂e 4萬噸及NO_x 7.8噸。緊隨其後，本集團亦於旗下天津北塘污水處理項目（「**北塘項目**」）開展廠內光伏試點工作。北塘項目機裝容量達5.74MW，年發電量為680萬千瓦時(kWh)，可滿足約10-20%的廠區用電。北塘項目亦引入了水源空調系統等綠色技術，進一步優化減排成效。展望將來，光大水務會繼續尋求更多減碳空間，積極推行更多試點項目。



In-plant solar photovoltaic facilities in Zibo Waste Water Treatment Project (Plant 1)
淄博污水處理項目(一廠)的廠內光伏發電設施

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Power Generation Through Anaerobic Digestion of Sludge

Sludge treatment includes three major procedures, namely dewatering, stabilisation and thickening. During the “stabilisation” period, anaerobic bacteria will perform anaerobic digestion – decompose, metabolise, and digest organic matter in waste water, then generate biogas which can replace fossil fuels for electricity production.

Promoting Innovative Technologies to Reduce Pollution and Carbon Emissions

Other than using diverse renewable energy sources, Everbright Water continues to adhere to its corporate philosophy of “Innovation-Driven Development” to uphold integrity and innovation. Hence, with a strong foundation in operational stability, the Group invests in the development of high-efficiency and innovative technologies. The Group expects to strengthen digital transformation through cross-border cooperation with corporate schools, close internal communication, and policy-oriented agility, such that we can continually lead and support the water resources management industry to make great strides towards green development.

Scientific R&D

The Group highly values technological innovation research and had stipulated intelligent water in stages as a reform of the Group. In May 2022, such R&D work came to an end and attained good progress in the field of precise control systems such as intelligent inspection, intelligent dosing, and quantification of industrial waste water. The journey of technological innovation R&D is challenging from in-depth theoretical research, hardware installment, software configuration to the cultivation of a green corporate culture. Nonetheless, it has significantly improved the Group’s work efficiency and sustainable development potential.

During the Reporting Period, the Group invested more than RMB43,513,793 in innovative technology, obtained 33 project patents (including 6 invention patents, 21 utility models, and 6 software copyrights), and published 4 technical papers. In addition, the Group collaborates with local tertiary and educational institutions to cultivate a good culture of scientific production through “Industrial-Academic” collaboration. The Group integrated advanced technology from external professional teams and refined valuable experience in internal structure, thereby enhancing the professionalism of the R&D team.

污泥厭氧消化發電

污泥處理包括「脫水、穩定和濃縮」三大程序。在「穩定」期間，厭氧細菌會進行厭氧消化——即分解、代謝、消化污水之中的有機物，從而產生沼氣取代化石燃料用作電力生產。

推動創新技術達致減污降碳

除了沿用多元再生能源，光大水務亦秉承「創新引領發展」的企業理念，堅持「守正創新」，在安全工作的基礎上投資開發高效能及創新科技。本集團期望透過企業學院跨界合作、緊密內部溝通及面向政策的敏捷觸覺，加強數字化轉型，引領並支撐水資源治理行業大步邁向綠色發展。

科研發展

本集團高度重視技術創新研究，亦特地設立了階段性的智慧水務為本集團進行改革。二零二二年五月，此項研發工作告一段落並取得一定進展，研發成果包括智能巡檢、智能加藥、量化工業廢水等精準控制系統。從理論深研、硬裝架構、到軟件配置及塑造綠色企業文化，科研創新之路充滿挑戰，卻全面提升本集團的工作效能與可持續發展的潛力，成效卓著。

報告期內，本集團投入創新技術的金額超過43,513,793元人民幣，獲得項目專利達33項（包括發明專利6項、實用新型21項、軟件著作權6項），發表技術論文達4篇。另外，本集團亦與國內高等院校合作，以「產學研」的方式建立科學化生產的良好傳統，融合外部專業的先進科技及提煉內部架構的寶貴經驗，提升研發團隊的科研水平。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Precise Aeration System 精確曝氣系統

In Shandong Zibo Waste Water Treatment Project (Plant 1), the Group has adopted a high-standard precise aeration system that includes 5 corridors with each equipped with 4 controls - a total of 20 valves. Considering that different types of valves have different air conditioning performance and prices, in the past three years, the Group has introduced three types of valves (rhombic valve, jet streamlined valve, and hexagonal aperture valve) to treat waste water with the highest economical and energy efficiency. At the same time, in order to use economic resources efficiently and reduce the costs of purchasing software services, the Group specially trained internal software experts to in charge of developing the "Enterprise WeChat Work Platform" and "Technology Centre Supervision Project Management Platform", aiming to create platforms that can meet the needs of the Group. The purpose is to create a highly-efficient communication channel which is suitable for the Group's needs and able to accurately and timely record the employees' feedback as well as the progress of each project. Although the relevant projects are still in the exploratory stage, the Group will continue to seek more innovative attempts and actively encourage project companies in the industry to invest in advanced aeration systems to create a win-win situation.

在山東淄博污水處理項目（一廠）內，本集團採用了高規格精確曝氣系統，當中包括5個廊道，每個廊道設有4個控制——共計20個閥門。考慮到不同種類的閥門各有其不同的空氣調節效能和價格，近三年內，本集團以綜合互補的研發思路同時引入了三種閥門（菱形閥、Jet流線型閥、六邊形光圈閥），以最具實惠及最高能源效益的方式處理污水。同時，為了能有效使用經濟資源、節省購買軟件服務的成本，本集團特意培養了內部軟件專家負責搭建「企業微信工作平台」及「技術中心督辦項目管理平台」，旨在打造一個可以貼近本集團需求的高效溝通模式，精確及時地紀錄員工反饋和重點督辦項目進度。雖然相關項目仍然處於探索階段，但是本集團會持續尋求更多創新嘗試，並踴躍號召業內的項目公司參與投資先進曝氣系統，創造雙贏局面。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Intelligent Operation

The Group believes that advanced technology is the driving force for production, and intelligent development will bring more accurate and effective work outcomes to the Group. To be specific, “intelligent” development refers the identification of the target object through the algorithm of the computer model by combining machine learning technology. During the design and development phase, the Group has improved the accuracy, precision and reduce the recall rate of each system by making use of the valuable feedbacks from its engineers and employees. This marked collaborative efforts towards a green vision.

智慧運營

本集團深信先進科技是引領生產的動力，而智慧化發展將為本集團帶來更精準有效的工作成果。所謂「智慧」，其實是結合了機器學習技術，通過計算機模型的算法來辨識目標事物。在設計研發的道路上，本集團借助工程師和員工的積極回饋，持續提升各個系統的準確率、精確率及降低召回率，為達成綠色願景而努力。

Intelligent Chemicals Dosing System for Phosphorous Removal 智能除磷加藥控制系統

At the end of 2020, the Group’s self-developed “Intelligent Phosphorus Removal and Dosing Control System” was registered as EB-iDC® (hereinafter referred to as this system) and subsequent improvement works were carried out in the past two years. Unlike the traditional (preset conditions) automatic control system, this system is based on an intelligent control algorithm to automatically and accurately adjust the dosing amount by closely monitoring the changes in water quality. In the early stage of development, the researchers first collected and tested the water samples in the plant, then checked the compatibility of related drugs, and carried out programming work based on the characteristics of water quality. After that, the team also started to simulate various situations, handling methods of extreme situations, fault tolerance mechanism, etc., and established a complete control strategy. This system is custom-made for the Group to achieve its objective of reducing drug consumption. The advantages of this system are that it could satisfy the Group’s actual operational needs, reduce the use of financial resources and achieve satisfying results. In the future, the Group will continue to explore ways to reduce chemical consumption, such as adding polymer coagulants, introducing a small amount of biological phosphorus removal technology, etc.

二零二零年底，本集團為自行研發的「智能除磷加藥控制系統」註冊商標EB-iDC®（下稱本系統），並在過往兩年間進行後續完善工作。有別於傳統的（預設條件）自動控制系統，本系統運用了智能控制算法，在嚴密監測水質變化之餘，作出即時用藥決定，務求靈活、自動、精確地調整藥量。在開發初期，研究人員先收集化驗了廠內水樣本，再實驗檢查相關藥品之匹配性，然後根據所獲得的水質特徵數據開展程式編製工作。其後，團隊亦著手模擬各種情境、極端情況處理方式、容錯機制等，建立起完整的控制策略。本著降低藥品消耗的目標，本系統為本集團量身訂製，不單貼合本集團的實際運營需要，亦同時耗費較少的財政資源，一石多鳥，綜合成效斐然。未來，本集團亦會繼續探索減低藥耗的方法，例如添加高分子凝固劑、引入少部份生物除磷工藝等。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Waste Water Treatment Plant New High-efficiency Micro-sand Charcoal Sedimentation Tank 污水處理廠新型高效微砂加炭沉澱池

As the requirements for water resource treatment have become increasingly stringent, the Group continues to seek breakthroughs and is committed to bringing more comprehensive water resource management service solutions to the public. Therefore, the Group introduced high-density sedimentation tank technology at the Malan River Waste Water Treatment Project in Dalian, Liaoning as a pilot project. The application of such technology at the project has attracted wide attention from the fellow industrial peers on such technology. The Group also carried out independent innovation work and successfully developed the “High-Density Sedimentation Tank Process” (hereinafter referred to as the process). The researchers first reviewed the micro-sand aggravated flocculation high-efficiency sedimentation tank process developed in the early 1990s, then refined the filtration efficiency of micro-sand and powder carbon such that the waste water treated by the plant can meet the national *Environmental Quality Standards for Surface Water* (GB3838-2002) Class IV standard. This process strengthened the flocculation of micro-sand and improves the ability of powdered carbon to absorb non-biodegradable organic matter. Compared with the old high-density sedimentation tank, this process is more suitable for characteristics of waste water treated in the Group’s plants. In particular, it is able to treat high-salt and high-colour industrial waste water, algae-containing waste water, low-turbidity river water and rainwater. On the basis of saving civil construction investment, only a cyclone separator is added to the equipment, and the total installed power remains unchanged. Therefore, the overall investment is obviously more favourable with significant effects. This process has been successfully registered as EBHES® High-Density Sedimentation Tank. It has been successfully applied to more than 20 projects and has won the second prize for the transformation and application of scientific and technological achievements.

隨著國內的水資源處理要求日趨嚴格，本集團持續尋求突破，致力於為大眾帶來更完善的水資源治理服務方案。因此，本集團以遼寧大連馬欄河污水處理項目為試點，引入高密度沉澱池技術，並樂見業界夥伴更多關注這項技術。在此基礎上，本集團進一步開展自主創新工作，成功研發出「高密度沉澱池工藝」（下稱本工藝）。研究人員首先回顧了90年代初開發的微砂加重絮凝高效沉澱池工藝，然後再精細化微砂和粉碳的過濾功效，使得經該廠處理的污水可以達到國家《地表水環境質量標準》(GB3838-2002) IV類標準。詳細來講，本工藝強化了微砂的絮凝作用，也提升了粉碳吸附不可生物降解之有機物的能力。相比舊式的高密度沉澱池，本工藝更加適合本廠的污水特徵，尤其能幫助處理高鹽高色度工業廢水、含藻類污水、和低濁河道水及雨水。在節約土建投資的基礎上，總裝機功率不變，額外增加的設備只有旋流分離器。項目整體投資優勢明顯，果效突出。本工藝已註冊商標為EBHES®高密度沉澱池，成功應用於20多個項目，並喜獲科技成果轉化應用二等獎。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Promote the Application of Advanced Technology Unlock the Potential of Energy-Saving and Carbon Reduction

推廣先進技術應用 深挖節能降碳潛力

As a leading enterprise in the water environment management industry, Everbright Water adheres to the mission of “Dual Carbon” and implements the directions relating to “Reducing Pollution and Carbon Emission” and “Boosting Synergy and Efficiency”. In order to optimise the core work of water management, the Group has carried out a series of external exchange activities such as policy study, research and exchange, and pilot projects. The Group aims to draw up an innovative carbon reduction path based on the experience and views of various parties, moving towards the vision of zero-carbon water.

作為水環境治理行業的領先企業，光大水務肩負「雙碳」的使命，落實「減污降碳」、「協同增效」的方針。為了優化水務治理的核心工作，本集團開展了一系列政策學習、調研交流、項目試點等對外交流活動，期望結合多方經驗和思維描繪創新減碳路徑，逐步邁向零碳水務的願景。

Low-Carbon and Sustainable Operating Goals 低碳及可持續運營目標

Achievements of Everbright Water’s Application of Advanced Technologies 光大水務應用先進技術的成果

Sustainable Water Use 可持續的水資源利用

The Group endeavors to meet needs of sustainable recycling of water resources. According to the natures of respective projects, the effluent quality of most of the projects complies with or is better than the *Discharge Standard of Pollutants for Urban Sewage Treatment Plants* (GB18918-2002) Class A standard or the *Environmental Quality Standards for Surface Water* (GB3838-2002) Class IV standard. The effluent is suitable for urban landscape water and general reusable water (recycled water), etc. Relevant technologies include self-developed waste water treatment processes (such as EBHES® High-Density Sedimentation Tanks), cutting-edge technology applications (such as EBAF® Third-Generation Biological Aerated Filters), etc.

本集團以國家所訂之標準為方向，努力滿足水資源可持續循環利用的需要。根據項目性質，現時大部分有應用先進科研成果項目的出水水質皆符合或優於《城鎮污水處理廠污染物排放標準》(GB18918-2002)一級A標準或《地表水環境質量標準》(GB3838-2002)IV類標準，適合作為城鎮景觀用水、一般循環再用用水(回用水)等。相關技術包括自主研發的污水處理工藝(如EBHES®高密度沉澱池)、前沿科技應用(如EBAF®第三代曝氣生物濾池)等。

Sustainable Development Strategies to Address Climate Change Risks

應對氣候變化風險的可持續發展策略

Low-Carbon and Sustainable Operating Goals

低碳及可持續運營目標

Achievements of Everbright Water's Application of Advanced Technologies

光大水務應用先進技術的成果

Energy Use

能源利用

The Group increases the ratio of renewable energy by introducing biogas power generation, and in-plant photovoltaics, and reduces electricity demand with the help of waste water source heat pumps. Each of Shandong Zibo Waste Water Treatment Plant (No. 1 Plant) and Tianjin Beitang Waste Water Treatment Plant makes full use of their local advantages to concurrently reduce pollution and carbon emissions. Based on the 25-year operation cycle of the Zibo photovoltaic project solely and assuming that the electricity consumption per kWh equals to 305g of standard coal, this project will save the Group a total of approximately 14,738 tonnes of standard coal. In addition, this project is expected to have an annual power generation of 1.9 million kWh, which can satisfy about 9% of the project's power consumption.

本集團現以引入沼氣發電及廠內光伏提升可再生能源比率，並借助污水源熱泵減少用電需求。山東淄博污水處理設施（一廠）及天津北塘污水處理廠都各自發揮其地域性優勢，減污降碳並行。單計算淄博光伏項目的25年運行週期，假設每度電耗相等於305克標準煤，該項目將可為本集團一共節省約14,738噸標準煤。另外，該項目預計年發電量為190萬千瓦時，可滿足約9%的項目廠區用電。

Low-Carbon operation

低碳運營

Through R&D and the introduction of cutting-edge technologies, the Group continues to optimise its technological processes and develop "intelligent" operation by integrating machine learning, electronic information management and the experience from external partners to promote innovation in water management models. Through precise control of aeration and dosing systems, renewable energy projects, etc., the Group is able to reduce energy and material consumption, continuously export green energy, offset carbon emissions through grid-connected power generation, and practice low-carbon operation of water projects.

通過研發工作和引入前沿科技，本集團持續進行工藝優化和運營「智慧化」建設，集合機械學習、電子化信息管理和外部夥伴的經驗，推動水治理模式創新。通過精確控制曝氣及加藥系統、可再生能源項目等，本集團得以降低能源及物料消耗，持續輸出綠色能源，並透過併網發電抵銷碳排放，實踐低碳運營的水務項目。

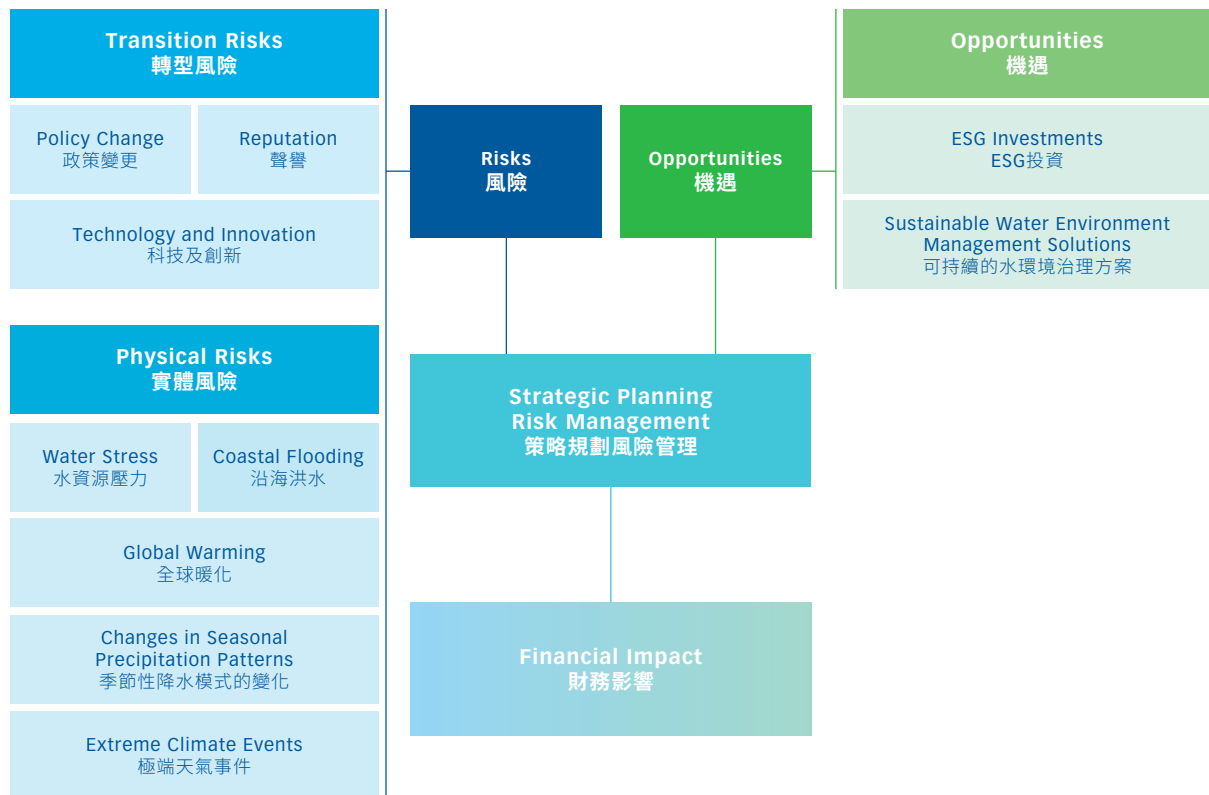
Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Risk Management

According to the framework and recommendations of TCFD, the Group disclosed and explained to stakeholders the process of identifying, assessing and managing climate-related risks. The Group assesses the potential climate-related risks and opportunities of each aspect, takes actions based on the analysis results of physical risks and transition risks, and formulates and implements climate risk control measures. At the same time, the Group also analyses the effectiveness and implementation risks of various measures in order to improve the efficiency of the overall operation. For reporting purpose, the diagram below shows an overview of the Group's key climate-related risks and opportunities.

風險管理

根據TCFD的框架及建議，本集團向持份者披露並闡述了本集團辨識、評估和管理氣候相關風險的流程。本集團評估了各個範疇的潛在氣候相關風險及機遇，並根據實體風險和轉型風險的分析結果作出行動，制定實施氣候風險控制措施。同時，本集團亦分析了各個措施的有效性以及執行風險，期望提升整體運營的效率。為方便報告，下圖概述了有關本集團之主要氣候相關風險和機遇。



Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Risk Management Process

According to the risk management plan, the Group has formulated and implemented a risk management process in order to effectively identify potential risks through clear contingency instructions and formulate and implement relevant measures for each project in a timely manner. Systematic measures and references can provide a complete and reliable set of decision-making principles and steps to ensure the Group's continued steady operation and development in a changing environment.

風險管理流程

根據風險管理計劃，本集團制定並實施了風險管理流程，務求通過清晰的應變指令有效識別潛在風險，適時為各個項目制定和落實相關措施。系統化的措施參據能夠提供一套完整可靠的決策原則與步驟，確保本集團在變動環境之下繼續穩健經營和發展。

Process of Climate Change Risk Management 氣候變化風險管理流程



Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

The Group has fully implemented climate risk identification, assessment and scenario analysis, formulation and reporting of management and control results, and will continue to use the fifth stage to refine the risk management process, aiming at qualitative risk assessment and quantitative analysis results to develop appropriate mitigation measures. In accordance with TCFD recommendations, the Group divides climate-related risks into two categories, physical risks and transition risks, and assesses major risks through scenario analysis, striving to minimise the climate risks faced by the Group.

Physical Risks

Climate change has led to various global impacts. Among them, unstable climate systems and extreme weather events may directly damage corporate assets and supply chains, cause financial losses, and affect physical assets/asset groups. In such a context, Everbright Water has a wide range of businesses covering raw water protection, water supply and waste water treatment, etc., and a large number of coastal projects geographically. The Group therefore implements source control by fully covering all aspects of water environment management. As it faces two major climate change-related risks including water resource shortage and coastal flooding, the Group therefore take references from the Aqueduct 3.0 released by the World Resources Institute and the coastal flood risk screening tool released by Climate Central. By using their databases for scientific scenario analysis, the Group can effectively assess these physical risks and take countermeasures against the impact on the Group.

本集團已經全面落實第一至四階段的工作（氣候風險辨識、評估與情境分析、制定與報告管控成果），並持續借助第五階段細化風險管理流程，針對風險質化評估和量化分析結果制定相應的緩解措施。按照TCFD建議，本集團把氣候相關風險劃分為兩類，包括實體風險和轉型風險，並以情境分析評估重大風險，致力把本集團所面臨的氣候風險減至最低。

實體風險

氣候變化帶來了全球性影響。當中，不穩定氣候的系統和極端氣候事件或會直接破壞企業資產及供應鏈，造成財務損失，影響實體資產／資產組。就本集團而言，光大水務的業務龐大，在種類上涵蓋了原水保護、供水及污水處理等，而在地理上亦涵蓋大量沿海項目。本集團憑藉完整涵蓋水環境治理的各個環節，實施源頭管控，卻亦因而面對水資源短缺與沿海洪水兩大主要氣候變化相關問題。因此，本集團參考了世界資源研究所發佈的Aqueduct 3.0及氣候中心(Climate Central)發佈的沿海洪水風險篩檢工具，透過採用其資料庫進行科學化的情境分析，本集團可以有效評估這些實體風險對本集團帶來的影響，作出應對措施。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Under current state scenario, 2040 SSP2 RCP4.5 scenario (optimistic scenario) and 2040 SSP2 RCP8.5 scenario (business-as-usual scenario), Everbright Water's water stress assessment is as follows:

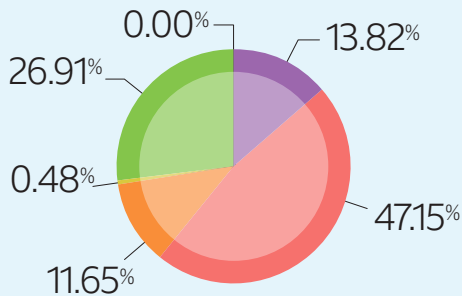
在當前狀態情境、二零四零年SSP2 RCP4.5情境(樂觀情境)和SSP2 RCP8.5情境(如常運作情境)下，光大水務的水資源壓力程度評估如下：

By Percentage of Capital Investment in Projects 按項目資本投資的百分比

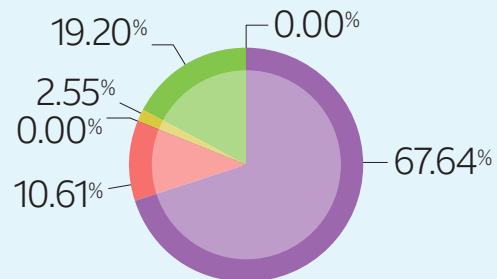
As of 31 December 2022, the total amount of investment was **RMB29.60 billion**.

截至二零二二年十二月三十一日，投資總額為**296.0億元人民幣**。

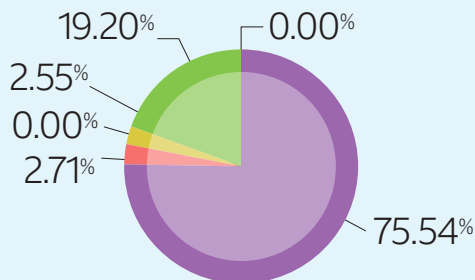
Water Stress Risk: Current State Scenario by % of Capital Investment in Projects
水資源壓力風險：當前狀態情境，按項目資本投資的百分比



Water Stress Risk: Optimistic Scenario in 2040 (SSP2 RCP4.5) by % of Capital Investment in Projects
水資源壓力風險：二零四零年樂觀情境(SSP2 RCP4.5)，按項目資本投資的百分比



Water Stress Risk: Business-as-Usual Scenario in 2040 (SSP2 RCP8.5) by % of Capital Investment in Projects
水資源壓力風險：二零四零年如常運作情境(SSP2 RCP8.5)，按項目資本投資的百分比



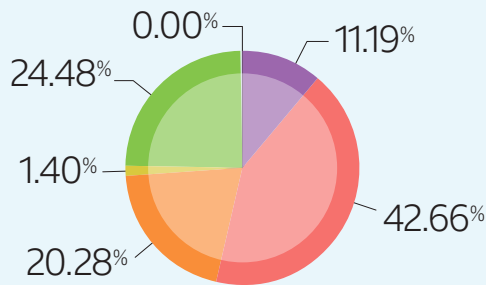
- Extremely high (>80%)
極高
- High (40-80%)
高
- Medium to high (20-40%)
中等至高
- Low to medium (10-20%)
低至中等
- Low (<10%)
低
- Arid and low water use
乾旱和低用水量

Sustainable Development Strategies to Address Climate Change Risks
應對氣候變化風險的可持續發展策略

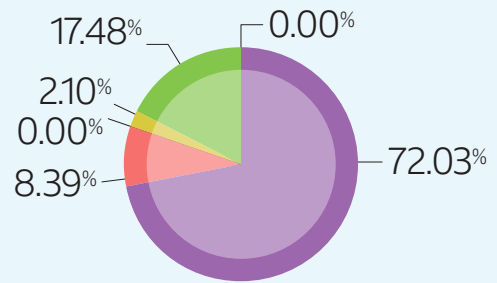
By Percentage of Number of Projects
按項目數目的百分比

During the Reporting Period, the Group's water stress risk by percentage of number of projects:
 在報告期內，本集團按項目數目百分比的水資源壓力風險：

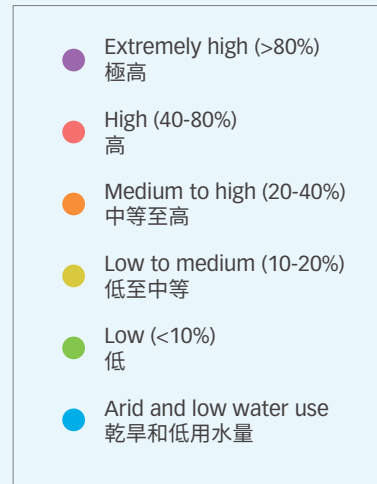
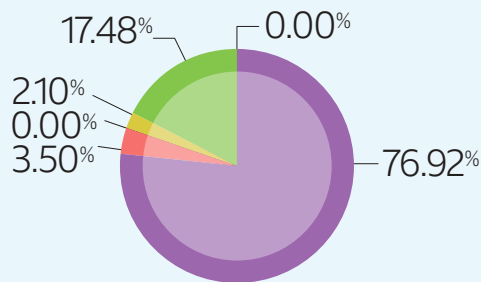
Water Stress Risk: Current State Scenario by % of Number of Projects
 水資源壓力風險：當前狀態情境，按項目數目的百分比



Water Stress Risk: Optimistic Scenario in 2040 (SSP2RCP4.5) by % of Number of Projects
 水資源壓力風險：二零四零年樂觀情境(SSP2 RCP4.5)，按項目數目的百分比



Water Stress Risk: Business-as-usual Scenario in 2040 (SSP2 RCP8.5) by % of Number of Projects
 水資源壓力風險：二零四零年如常運作情境(SSP2 RCP8.5)，按項目數目的百分比



Sustainable Development Strategies to Address Climate Change Risks

應對氣候變化風險的可持續發展策略

Water Stress Risks 水資源壓力風險

Why Assess water Stress? 為什麼要評估水資源壓力程度?

Being a water environment management business provider, water is the foundation of the Group's business and as such, prolonged drought or insufficient water supply will directly affect its business.

本集團業務聚焦水環境綜合治理，因此水資源是本集團的業務根基。長期乾旱或供水不足將直接影響本集團的運營。

Climate Scenario 氣候情境

The three scenarios include: current state, 2040 SSP2 RCP4.5 scenario (optimistic scenario), SSP2 RCP8.5 scenario (business as usual scenario).

三種情境包括：當前狀態、二零四零年SSP2 RCP4.5情境（樂觀情境）、SSP2 RCP8.5情境（如常運作情境）。

Methodology 評估方法

Based on the "Water Stress Assessment", the Group measures the ratio of the total water withdrawals to available renewable surface water and groundwater supplies. A higher water stress risk indicates a higher associated risk and more competition among local users for freshwater.

本集團利用「水資源壓力評估」量度總取水量及可再生地表水和地下水供應量的比率。若水資源受壓程度高，則意味相關風險系數高，亦代表本地用戶之間對淡水的需求存在激烈競爭。

Findings 調查結果



By Percentage of Capital Investment in Projects 按項目資本投資的百分比

According to the Group's analysis, water resource stress is the main climate-related risk of the Group's projects. 60.97% of the Group's project investments under preparation, construction, commissioning and operation are categorised with high water stress or above under the current state scenario. By 2040, the figure will be increased to 78.25% under both the optimistic scenario (SSP2 RCP4.5) and the business-as-usual scenario (SSP2 RCP8.5). 根據本集團的分析，水資源壓力是本集團項目的主要氣候相關風險。在當前狀態情境下，本集團在籌劃、建設、投產和運營中的項目投資，有60.97%屬於水資源壓力程度高或以上級別。到二零四零年，在樂觀情境(SSP2 RCP4.5)和如常運作情境(SSP2 RCP8.5)下，兩者都增加到78.25%。



By Percentage of Number of Projects 按項目數目百分比

53.85% of the Group's projects under preparation, construction, commissioning and operation, are categorised with high water stress or above under the current state scenario. By 2040, the figure will be increased to 80.42% under both the optimistic scenario (SSP2 RCP4.5) and the business-as-usual scenario (SSP2 RCP8.5). 在當前狀態情境下，本集團在籌劃、建設、投產和運營中的項目中，有53.85%屬於水資源壓力程度高或以上級別。到二零四零年，在樂觀情境(SSP2 RCP4.5)和如常運作情境(SSP2 RCP8.5)下，兩者都增加到80.42%。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Mitigation Measures for Water Stress Risk 針對水資源壓力風險的緩減措施

By improving the technological level of reusable water and re-circulating water, the Group is able to better manage water resources effectively and alleviate the pressure of resource shortage. The Group will take corresponding treatment measures (such as ultrafiltration, nanofiltration, reverse osmosis, etc.) according to various types of waste water so that the treated effluent will meet the use standard of cooling water. Advanced waste water treatment technology can help the Group achieve a water recovery rate of 80%, and gradually realise the Group's vision of "full reuse, zero discharge".

通過提升回收用水和循環水的科技水平，本集團可更加有效管理水資源並緩解資源短缺的壓力。本集團會根據各種類廢水作出相應的處理措施（如超濾、納濾、反滲透等），使得經處理的出水達到冷卻水的使用標準。先進的廢水處理工藝可幫助本集團達到80%的水回收率，逐步實現「全回用、零排放」的願景。

Re-Circulating Water 循環水

Water is re-circulated within the waste water treatment system as far as practical to reduce the use of freshwater.

儘量在廢水處理系統內循環使用可重用的水資源，減少消耗淡水資源。

Reclaimed Water 再用水

Effluent water is not an immediately available resource. However, upon efficient treatment, it is able to satisfy certain water quality standards and become reusable. Reclaimed water can be used for general industrial purposes or for non-potable uses (e.g. street cleaning, vehicle washing, landscaping, toilet flushing, firefighting, etc.).

排放水並非立即可用的資源。但經過高效處理後，它可以達到一定的水質安全標準，成為再用水。再用水可作一般工業用途或非飲用水用途（如清潔街道、清洗車輛、美化園林、沖廁、救火等）。

Reusable Water 中水回用

The Group's reusable water projects purify effluent from waste water treatment plants in accordance with the *Urban Sewage Recycling Industrial Water Quality* (GB/T19923-2005) or equivalent standards so that it can be reused. Reusable water produced by reusable water projects can be used for power plants and general industrial use to reduce the freshwater demand of cities.

本集團的中水回用項目根據《城市污水再生利用工業用水水質》(GB/T19923-2005)或相等標準處理污水處理廠的廢水，使其能夠被再次利用。通過本項目產生的回用水可用於發電廠或作一般工業用途，幫助節省城市淡水用量。

Sustainable Development Strategies to Address Climate Change Risks

應對氣候變化風險的可持續發展策略

Coastal Flood Risks 沿海洪水風險

Why Assess Coastal Flood Risk?

為什麼要評估沿海洪水風險?

Coastal flood risks will pose a direct threat to the safety of the Group's assets and employees.

沿海洪水風險將對本集團資產及員工安全構成直接威脅。

Methodology 評估方法

For coastal areas' projects, coastal flood risk will be measured through the projects that will be below the combined level of projected sea level rise and local annual flood height by 2040.

針對沿海地區項目，沿海洪水風險將計算將在二零四零年位於低於預測的海平面上升及當地年度洪水疊加水位總和的項目。

Evaluation results will be expressed in percentage of capital investment and percentage of number of projects. The Group's coastal flood risk assessment covers all projects that are under preparation, construction, commissioning and operation.¹

評估結果將按資本投資和項目數目百分比表示。本集團的沿海洪水風險評估涵蓋了所有正在籌備、建設、投產和運營中的項目。¹

Climate Scenario 氣候情境

2040 SSP2-4.5 Scenario (Optimistic Scenario) and SSP5-8.5 Scenario (Business-as-Usual Scenario)

二零四零年SSP2-4.5情境(樂觀情境)和SSP5-8.5情境(如常運作情境)

Findings 調查結果



By Percentage of Capital Investment in Projects 按項目資本投資的百分比

According to the analysis of the Group, 40.33% of the investments of the Group's projects under preparation, construction, commissioning and operation are in coastal areas.

根據本集團的分析，在所有正在籌備、建設、投產和運營的項目之中，有40.33%的投資是位於沿海地區。

The risk calculations for the optimistic scenario (SSP2-4.5) and the business-as-usual scenario (SSP5-8.5) are similar: 16.86% of the investment will be below the combined level of projected sea level rise and local annual flood height by 2040.

樂觀情境(SSP2-4.5)和如常運作情境(SSP5-8.5)的風險計算結果相似：將在二零四零年位於低於預測的海平面上升及當地年度洪水疊加水位總和投資佔16.86%。



By Percentage of Number of Projects 按項目數量的百分比

According to the analysis of the Group, 39.86% of the number of Group's projects under preparation, construction, commissioning and operation are located in coastal areas.

根據本集團的分析，在所以正在籌備、建設、投產和運營項目之中，有39.86%的項目是位於沿海地區。

Risk calculations for the optimistic scenario (SSP2-4.5) and the business-as-usual scenario (SSP5-8.5) are similar: 25.87% of projects will be below the combined level of projected sea level rise and local annual flood height by 2040.

樂觀情境(SSP2-4.5)和如常運作情境(SSP5-8.5)的風險計算結果相似：將在二零四零年位於低於預測的海平面上升及當地年度洪水疊加水位總和的項目數量佔25.87%。

Note:
附註：

¹ The calculation of flood risk referred to Coastal Risk Screening Tool published by Climate Central in 2020
沿海洪水風險的計算方法參考了氣候中心(Climate Central)於二零二零年發佈的沿海洪水風險篩檢工具。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Mitigation Measures for Coastal Flood Risk 針對沿海洪水風險的緩解措施

Projects with Built-in Flood Protection Measures 內置防洪措施的項目

The greening of the plant areas not only enhances the aesthetics and appreciation of the project, but also increase the flood prevention capacity.
廠區綠化不單能夠提升項目的美觀和可賞性，亦增加了防洪功能。

Highlights of selected projects:
部份亮點項目：



Jiangyin Waste Water Treatment Project
江陰污水處理項目

(Overall site greenery area:
approximately 98,000 square meters)
(整體廠區綠化面積：
約98,000平方米)



Shandong Ji'nan Waste Water
Treatment Project

山東濟南污水處理項目
(Overall site greenery area:
approximately 94,000 square meters)
(整體廠區綠化面積：約94,000平方米)

Height of Core Equipment/Machinery 核心設備／機械的高度

To the extent practicable, key equipment and machinery are elevated to avoid damages due to flooding.

在切實可行的範圍內盡可能把核心設備和機器放置於較高的位置，避免洪水侵蝕。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Mitigation Measures for Coastal Flood Risk 針對沿海洪水風險的緩解措施

Sponge City 海綿城市

The Group's Zhenjiang Sponge City Project is constructed based on the "blue-green infrastructure" concept. By constructing the systems which can strengthen the flooding control and effectively control surface runoff, the project is able to improve a city's abilities in handling rainwater (such as: absorption, infiltration, retention, release and purification) and enhance the urban ecosystem. The sponge city project has a series of constructions, including rainwater storage tanks, rainwater pumping stations, drainage pipelines, waste water treatment facilities, and ecological restoration projects.

本集團的鎮江海綿城市項目依照「藍綠建設」的概念而建，望透過建設防洪排澇系統及加強控制表面徑流，提升城市處理雨水的能力（如吸納、蓄滲、緩釋和淨化等），完善城市生態系統功能。海綿城市項目有一系列建設，包括：雨水調蓄池、雨水泵站、排澇管道、廢水處理設施以及生態修復工程。



Zhenjiang Sponge City Project
鎮江海綿城市項目

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Mitigation Measures for Coastal Flood Risk 針對沿海洪水風險的緩解措施

River-Basin Ecological Restoration 流域綜合治理

On the basis of “palliative” measures such as flood control, drainage, and water diversion, the Group undertakes comprehensive water environment management in order to fully carry out the restoration works on waste water interception, pollution source treatment and ecological restoration. Nanning Shuitang River Integrated Restoration PPP Project is one of the Group’s PPP projects. Based on the communication between the private entities and the government, this project covers the treatment of black and odorous water bodies in urban inland rivers, upgrading and construction of municipal wastewater pipeline networks, construction and operation of water quality purification plants, automatic monitoring of river water quality, sponge cities, landscape parks along rivers, and wetland payment projects. To achieve a more holistic river-basin management, this project has broadly addressed the pollution reduction, flood control, river ecological restoration and maintenance.

在防洪、排澇、引水等「治標」措施的基礎上，本集團開展了全面的水環境綜合治理，期望深化控源截污、內源治理、生態修復等「治本」工作。南寧市水塘江綜合整治工程PPP項目是本集團的PPP項目之一。仰賴一系列企業政府溝通工作，該項目最終達成了城市內河黑臭水體治理、市政污水管網改造建設、水質淨化廠建設運營、河道水質自動監測、海綿城市、沿河景觀公園、濕地付費項目等。該項目全方位兼顧減污、防洪以及河道水生態修復維護，達致更具整全觀的流域治理。



Nanning Shuitang River Integrated Restoration PPP Project
南寧水塘江綜合整治工程PPP項目

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Climate-Related Physical Risk Matrix 與氣候相關的實體風險矩陣

Based on the current state and different climate change scenarios in 2040, the Group analysed the risks of relevant entities and created a physical risk matrix.

基於當前狀態及二零四零年不同氣候變化情境，本集團分析了相關實體風險，並創建了實體風險矩陣。

Key findings:

主要發現：

- Under the current state, water stress had a medium impact on the Group's projects. However, under the SSP2 RCP4.5 scenario (optimistic scenario) and the SSP2 RCP8.5 scenario (business-as-usual scenario) by 2040, water stress would be increased to high impact.
在當前狀態下，水資源壓力對本集團的項目產生了中度影響。然而，在二零四零年SSP2 RCP4.5情景（樂觀情境）和SSP2 RCP8.5情景（如常運作情境）下，水壓力將提升至高度影響。
- Under the 2040 SSP2-4.5 scenario (optimistic scenario) and SSP5-8.5 scenario (business-as-usual scenario), coastal floods had a low impact on the Group's projects.
在二零四零年SSP2-4.5情境（樂觀情境）和SSP5-8.5情境（如常運作情境）下，沿海洪水對本集團的項目均產生了較低影響。

L

Low impact:
較低影響：

<25%

of project investments impacted with high risk or above¹
的項目投資受到高風險或以上影響¹

M

Medium impact
中度影響：

≥25% and <75%

of project investments impacted with high risk or above¹
的項目投資受到高風險或以上影響¹

H

High impact
高度影響：

≥75%

of project investments impacted with high risk or above¹
的項目投資受到高風險或以上影響¹

Consequences of Climate Change on Everbright Water's Projects under Different Scenarios 光大水務項目在不同情境中的氣候變化後果

	Current state 當前狀態	SSP2 RCP4.5 (Optimistic) SSP2 RCP4.5 (樂觀情境)	SSP2 RCP8.5 (Business-as-Usual) SSP2 RCP8.5 (如常運作)	SSP2-4.5 (Optimistic) SSP2-4.5 (樂觀情境)	SSP5-8.5 (Business-as-Usual) SSP5-8.5 (如常運作)
Water Stress Risk 水資源壓力風險	M	H	H	/	/
Coastal Flood Risk 沿海洪水風險	/	/	/	L	L

Note:

附註：

¹ For coastal flood risk, the Group's projects that would be below the combined level of projected sea level rise and local annual flood height by 2040 were categorised as high risk.

¹ 在沿海洪水風險方面，本集團所有將在二零四零年位於低於預測的海平面上升及當地年度洪水疊加水位總和的項目均被評價為高風險。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Other Physical Risks

其他實體風險

Physical Risks 實體風險	Potential Impacts 潛在影響
Changes in seasonal precipitation patterns – generally more humid winters (with less precipitation as snow) and drier summers (with a greater possibility of drought) 季節性降水模式改變——一般而言冬季較濕(降雪減少)和夏季較乾(乾旱可能性較大)	<ul style="list-style-type: none"> Changes to the hydrological conditions of project sites 項目現場的水文條件改變 Additional environmental stress on site vegetation 現場植被需面臨額外環境壓力 Reduce water supply during dry seasons 旱季的供水減少
Increase in average and daily maximum temperature 平均和每日最高溫度升高	<ul style="list-style-type: none"> Breeding of mosquito and bacteria 滋養蚊蟲細菌 Health risk to employees due to hot workplaces 高溫工作場所帶來健康風險 Unpleasant odours caused by increased temperature, thereby causing negative impacts 厭臭等不良氣味因環境溫度升高加劇，從而帶來負面影響
Increase in frequency and magnitude of extreme weather events 極端天氣事件的頻率和強度增加	<ul style="list-style-type: none"> Buildings and facilities damaged by storms 建築物和設施受暴風雨侵蝕 Open-stored materials being blown away by wind, causing damage and polluting the surroundings 暴風吹襲露天材料，帶來損失及周邊污染 Increased health and safety risks to employees exposed to extreme weather conditions 員工更容易暴露於極端天氣之下，增加健康和 safety 風險 Project revenue affected due to operational disruptions or delay (e.g. unscheduled shutdown of facilities) 項目收入因運營中斷或延誤而受影響(例如設施的非計劃停工) Power outage due to damage of power supply facilities (including both onsite and/or grid infrastructures) 供電設施(包括場內及/或電網設施)受到破壞，造成停電/電源故障
Changes in precipitation patterns 降雨模式改變	<ul style="list-style-type: none"> Increase in extreme rainfall events, elevating the risk of waste water bypass discharges 極端降雨事件增加，導致污水繞流排放的風險加劇 Decrease in total rainfall amount, causing an increase in waste water concentrations which would impose burden to the waste water treatment systems 總降雨量的減少將導致污水濃度上升，為污水處理系統帶來沉重負擔

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Mitigation Measures for Physical Risks

As mentioned above, the Group has implemented a series of targeted measures in response to the major physical risks. In order to further enhance its flexibility and resilience against climate change, Everbright Water has launched a series of additional policies and plans to prevent and mitigate such risks.

1. Emergency Response

In response to the various types of extreme weather events (such as rainstorms, floods, typhoons, thunderstorms, sandstorms, etc.), the Group has formulated countermeasures for various emergencies, in order to improve the mobility, flexibility and resilience of its team. In response to occurrence of extreme weather events during the flood seasons, the Group has formulated and released the following measures, namely *Notice on Strengthening Work Safety in Labour Day Holiday*, *Notice on Commencing "Safety Production Month"*, *Notice on Safe Management of Production Safety during Flood Seasons and under Catastrophic Weather Conditions*, *Notice on Management of Production Safety during Adverse Weather*, *Notice on Work Measures to Prepare for Strong Wind, Rainstorm, Thunderstorm and Lightning*, *Crisis Management Plan*, *Contingency Plans for Work Safety and Accidents (Comprehensive)*, *Contingency Plans for Floods*, etc. The Group has deployed necessary measures in advance to ensure the health and safety of its employees, as well as to safeguard the Group's assets to minimise losses.

實體風險的緩解措施

如上文所述，本集團已就個別重大實體風險作出針對性的應對措施。為了進一步提升本集團於氣候變化下的靈活應變和抗禦能力，光大水務推出了一系列輔助性政策與計劃，協助本集團未雨綢繆、防患於未然。

1. 應急反應

面對極端天氣事件（如暴雨、洪水、颱風、雷暴、沙塵暴等）的多變多樣性，本集團為各類突發事件制定了應對措施，期望提高團隊機動性、靈活性及抗逆力。針對汛期間的極端天氣事件，本集團制定並發佈了如下措施：《關於加強「五一」假期安全生產工作的通知》、《關於展開「安全生產月」活動的通知》、《關於認真做好汛期及災害性天氣安全生產管理工作的通知》、《關於加強災害性天氣期間安全生產管理工作的通知》、《關於做好暴雨雷電大風等惡劣天氣防範應對工作的通知》、《危機管理計劃》、《安全生產事故（綜合）應急預案》、《防汛應急預案》等。本集團積極提前部署，全力確保員工身體健康、資產安全無恙，盡可能減少損失。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

At project level, all project companies conduct regular reviews on their adverse weather protection measures, and implement various measures to safeguard their communication, logistics support and emergency supplies to ensure a safe operation at all times. A few days before the arrival of an anticipated extreme weather event, all relevant projects companies will deploy their contingency plans in advance including stocking up emergency supplies, strengthening backup power systems, and enhancing information exchange and communication between the frontline emergency response teams.

The Group also carried out specific investigation and assessment of potential hazards to ensure precautionary measures were adequately in place. Furthermore, it carried out various emergency preparedness drills to improve the staff capabilities in terms of accident prevention and handling skills. The Group also conducted various on-site plans and key emergency drills which target certain key locations and key positions, as well as preliminary practical and operational emergency response drills in particular for those frontliners.

在項目層面，所有項目公司定期檢測針對惡劣天氣的保護措施及實行通信、物流、應急物資保障工作，以確保時刻安全運行。所有相關的項目公司在預計發生極端天氣事件前幾天，已額外提早部署應急準備工作，包括儲備應急物資、加強後備電源、進一步加強前線應急成員單位的資訊交流與工作聯繫等。

本集團亦專門調查和評估潛在危害，以確保充分採取預防措施。此外，本集團展開了應急準備演習以此提高員工的事故預防和處理能力。演習針對重點場所和重點崗位，展開現場處置方案和重點崗位應急處置演練活動。特別是車間班組一線員工操作式、實戰化的初期應急處置演練，提高應急處置能力。



Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

2. Robust Preventive Maintenance Programme

To ensure the infrastructures are able to operate within a certain range despite the climate change, the Group has implemented a robust preventive maintenance programme. Such programme will perform regular and frequent maintenance on key systems to reduce the change of failure and extend uptime. Hence, the programme allows project companies to address any problems before they arise.

3. Climate-Related Risk Insurance

In response to climate-related natural disasters, the Group has insurance in place to cover compensation to the Group and its employees for damage to projects, interruption in operations, health impact to workers, etc. Corresponding climate-related natural hazards include lightning, rainstorms, floods, storms, tornadoes, hail, typhoons, hurricanes, dust storms, blizzards, landslides, mudslides, ground subsidence and other natural disasters.

Transition Risks

Following the acceleration of the global green economic reform, the governments and regulatory agencies of various countries progressively introduce numerous policy measures to promote green and low-carbon transformation of different industries. In order to achieve the carbon reduction target, the Group also faces new transition risks. For example, when introducing innovative green technology, the durability and effectiveness of such technology may not be proven until a long period of time, causing uncertainty to business operations. On the other hand, as investors pay greater attention to climate change, investors and industry peers will prefer those opportunities which are related to carbon and pollution reduction. Therefore, these bring transition risks to corporation. In view of these changes, the Group will actively formulate low-carbon transformation strategies and strengthen greenhouse gas auditing and disclosure, so as to enhance its operational capabilities and green reputation, and seize climate opportunities.

2. 健全的預防性維修計劃

為確保在氣候變化的影響下基礎設施的操作性能維持在相同範圍內，本集團實施了健全的預防性維修計劃，針對關鍵系統進行定期、頻繁的維修活動，以減少故障的變化並延長正常運行時間。該程序使項目公司可以在問題出現之前即有所應對。

3. 氣候相關風險的保險

應對氣候相關的自然災害，本集團已為項目損害、運營中斷、員工健康受損等潛在問題購入保險，確保意外事件發生後，本集團及員工可以獲得相應賠償和保障。氣候相關的自然災害包括：閃電、暴雨、洪水、風暴、龍捲風、冰雹、颱風、颶風、沙塵暴、暴風雪、滑坡、泥石流、地面塌陷和其他自然災害。

轉型風險

隨著全球綠色經濟改革步伐加快，各國政府及監管機構都相繼推出更多政策措施，推動各行業進行綠色低碳轉型。為實現減碳目標，本集團亦因此面臨了新的轉型風險。例如，在引入創新綠色科技時，該技術的續航力和有效性或未經長時間驗證會相繼增加企業運營的不確定性。另外，隨著投資者更加重視氣候變化議題，投資方以及業內競爭對手都會更重視低碳降污的議題，為企業帶來更大轉型壓力。有見及此，本集團會繼續積極擬訂低碳轉型戰略及加強溫室氣體核算和披露，鞏固本集團運營能力、提升綠色聲譽，把握氣候機遇。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Scenario Analysis and Management Approach

情境分析及管理方針

Regarding the “Net Zero Emissions by 2050 Scenario” and the “Stated Policy Scenario”, the following are the results from the Group’s analysis (including: transition risks, potential impacts and management approaches).

針對「二零五零淨零排放情境」及「既定政策情境」，以下為本集團的分析結果（包括：轉型風險、潛在影響及管理方針）。

Categories 類別	Major Transition Risks 轉型主要風險	Potential Financial and/ or Operational Implications 潛在財務及／或運營影響	Management Approaches 管理方針
Policy Changing Risk 政策變動風險	<p>Carbon tax, fuel/energy tax, volume and trading control 碳稅、燃料／能源稅、總量管制與交易</p> <p>Affected by regulatory authorities’ restrictions on greenhouse gas emissions and/or mandatory carbon trading. For example, China plans to achieve carbon neutrality by 2060. 受監管部門關於溫室氣體排放的限制及／或強制碳交易的影響。例如，中國計劃於二零六零年達致碳中和。</p> <p>At the same time, under the “Net Zero Emissions by 2050 Scenario”, regulatory authorities will implement stricter restrictions and measures. 同時，在「二零五零淨零排放情境」下，監管部門將實施更嚴格的限制和措施。</p>	<ul style="list-style-type: none"> Increased operating costs. 運營成本增加 Early retirement of existing assets due to policy changes. 因政策變動而提前報廢現有資產 Increased investment expenditure (to develop low-carbon technologies). 投資開支增加（用於開發低碳技術） 	<ul style="list-style-type: none"> To strengthen the relationship between various regulatory authorities and communicate closely with relevant government departments to ensure that the projects can maximise their green performance. 加強與各監管部門之間的聯繫，並與有關政府部門密切溝通，確保項目能夠在最大程度上發揮其綠色效能。 To set a team of specialist to monitor project performance, make appropriate adjustments according to regulations, and actively take actions in response to the policy changes. 成立專門小組監察項目表現，並根據法規作出適切調整，積極採取措施應對政策變動。 To improve the energy efficiency of operating assets, increase the proportion of electricity supplied by renewable energy, and adopt more carbon offset measures (e.g. heat generation from sludge, large-scale tree planting). 提高運營資產的能源效率，增大可再生能源的供電比率，並採取更多的碳抵銷措施（如污泥產熱、大規模植樹）。 Taking the R&D of “Intelligent Water” as an example, to carry out additional research work when necessary, in order to reduce carbon and pollution by applying new technologies and directions, moving towards “Dual Carbon”. 以研發「智慧水務」為例，可於需要時展開額外研究工作，以嶄新科技思維降排去污減碳，邁向「雙碳」。

Sustainable Development Strategies to Address Climate Change Risks

應對氣候變化風險的可持續發展策略

Categories 類別	Major Transition Risks 轉型主要風險	Potential Financial and/ or Operational Implications 潛在財務及／或運營影響	Management Approaches 管理方針
	<p>Sustainability/ESG reporting 可持續發展／ESG報告</p> <p>By referring to SEHK, SGX, and key international sustainability reporting guidelines, the global investors and ESG rating agencies have imposed increasingly stringent requirements on climate-related information disclosure. 參照聯交所、新交所、及不同國際可持續報告指引，環球投資者與ESG評分機構都對氣候相關資料披露的要求越發嚴謹。</p> <p>Companies are required to disclose their estimated greenhouse gas emissions and plans to address climate-related risks. 當中，企業需要披露其溫室氣體排放的估算和應對氣候相關風險的計劃。</p> <p>At the same time, under the "Net Zero Emissions by 2050 Scenario", regulatory authorities will implement stricter restrictions and measures. 同時，在「二零五零淨零排放情境」下，監管部門將實施更嚴格的限制和措施。</p>	<ul style="list-style-type: none"> Increased operating costs 運營成本增加 Increased other expenses (to analyse and matrix climate-related risk data) 其他開支增加 (用於分析氣候相關風險數據，並就其建立矩陣) 	<ul style="list-style-type: none"> To closely monitor the sustainable development/ESG reporting guidelines, and comply more than the minimum requirements within the feasible range, and strive to become the enlightenment pioneer of the sustainable development industry. 緊貼可持續發展／ESG報告指引，並在可行範圍內超出最低要求，致力成為可持續發展行業的啟蒙先鋒。 To engage a professional organisation to assist in the preparation of this Report, conduct analysis by referring to the latest international standards, and adopt the most appropriate greenhouse gas emission estimation method and disclosure framework. 委託專業機構協助編制本報告，並參考最新的國際標準作出分析，採取最恰當的溫室氣體排放估算方法及披露框架
<p>Technology and Innovation Risks 科技與創新風險</p>	<p>Technological advancement required 需要進行科技革新</p> <p>In response to increasingly stringent carbon reduction requirements, companies need to adopt more advanced technologies and improve existing system functions. At the same time, under the "Net Zero Emissions by 2050 Scenario", regulatory authorities will implement stricter restrictions and measures. 為回應日益嚴格的減碳要求，企業需要採用更先進的科技並完善既有系統功能。同時，在「二零五零淨零排放情境」下，監管部門將實施更嚴格的限制和措施。</p>	<ul style="list-style-type: none"> Increased operating costs. 運營成本增加 Increased R&D spending (to introduce new technologies, replace old ones with new ones). 研發開支增加 (用於引入新型技術、汰舊換新) Increased investment expenditure (for technology development) 投資開支增加 (用於技術開發) 	<ul style="list-style-type: none"> To actively introduce professional and technical personnel, carry out independent technology R&D, promote the transformation of technological achievements and project application, and adhere to "Innovation-Driven Development". 積極引進專業技術人才、開展自主技術研發、推動技術成果轉化及項目應用，堅持「創新引領發展」。 To co-operate with relevant academic institutions and project companies to foster exchange between internal and external teams and promote technology R&D and innovation. 與相關院校及項目公司合作，增進內外團隊交流，推動科技研發與創新。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Categories 類別	Major Transition Risks 轉型主要風險	Potential Financial and/ or Operational Implications 潛在財務及／或運營影響	Management Approaches 管理方針
Reputation Risk 聲譽風險	<p>Relationship with ESG investors 與ESG投資者的關係</p> <p>Investors and competitors in the industry are paying more attention to the sustainable development and green responsibility of enterprises. Therefore, companies need to strengthen the accounting and disclosure of ESG and carbon emissions, and keep abreast of market expectations. 投資方以及業內競爭對手都越來越重視企業的可持續發展及綠色責任。因此企業需要加強ESG及碳排放的核算和披露，緊貼市場期望。</p> <p>At the same time, under the “Net Zero Emissions by 2050 Scenario”, regulatory authorities will implement stricter restrictions and measures. 同時，在「二零五零淨零排放情境」下，監管部門將實施更嚴格的限制和措施。</p>	<ul style="list-style-type: none"> Increased operating costs 增加運營成本 Increased other expenses (for climate change risk management and ESG disclosure) 其他開支增加 (用於氣候變化風險管理及ESG披露工作) 	<ul style="list-style-type: none"> To estimate the GHG offset potential of waste water treatment projects based on empirical data and scientific calculations for setting carbon reduction targets. 以實證科學數據為計算基礎，估算污水處理項目的溫室氣體抵銷潛力，並以此作為制定減碳目標依據。 To enhance the communication channels with stakeholders. On one hand, collect opinions and feedback from various sources, and on the other hand, help supply chain partners and the general public to better understand the unique nature of the water environment management business and the overall environmental benefits it brings (protecting public health, enhancing urban flood control capacity, stable river water ecosystem, etc.). 鞏固與持份者的溝通渠道，一方面收集多方意見回饋，另一方面幫助供應鏈夥伴以及社會大眾更了解水環境治理業務的獨特性質及其帶來的整體環境效益 (保障民眾健康、加強城市防洪能力、穩定河道水生生態系統等)。

Exploring Climate Change Risk Adaptation Measures for Project Lifecycle

探索項目生命週期的氣候變化風險應對措施

The long-term challenges posed by climate change are dynamic and complex. Therefore, the Group continues to take a proactive attitude to prepare for the unknown and actively mitigate the physical and transition risks. The Group has introduced a whole set of process for exploration work, using the concept of life cycle to fully examine each stage of each project, in order to fully identify potential risks, and to develop and implement strategies in response to climate change. Focus areas include: early planning, design, construction, and operation and management.

氣候變化帶來的長期挑戰多變而複雜。因此，本集團會繼續以積極的態度未雨綢繆，全力減輕實體和轉型風險。本集團引入了探索工作的整套流程，以生命週期的概念完整審視每個項目的各個階段，務求充分識別潛在風險，從而主動採取策略，從容應對氣候變化。關注重點包括：早期規劃、設計、施工和運營及管理。

Sustainable Development Strategies to Address Climate Change Risks

應對氣候變化風險的可持續發展策略



Planning 規劃

Renewing Site-Selection

更新選址考量

- To incorporate climate factors when selecting the project sites.
將氣候因素納入項目選址過程。
- To take into account the hydrometeorological parameters of the place and the risk of extreme weather, and avoid choosing places with unfavorable conditions where possible.
參照該地水文氣象參數與極端天氣風險，盡可能避免選擇條件不利的地點。

Green Building/Infrastructure Development

綠色建築／基礎設施開發

- To consider the building life cycle and estimate climate-related impacts.
把建築物生命週期納入考量，並預估氣候相關的影響。
- To make compliance with green building certification a goal in planning.
以符合綠色建築物認證為規劃目標。
- To adopt advanced technology (such as intelligent real-time energy monitoring system) to control the energy performance of existing buildings, control and reduce greenhouse gas emissions.
採用先進技術（如智能實時能源監控系統）管控現有建築物的能源績效，掌握並減少溫室氣體排放。



Design 設計

Drainage and Flood Prevention

防洪及排水設計

- To adopt a drainage design with high climate adaptability to enhance project flexibility cope with different rainfall amounts and rainfall frequencies.
採用氣候適應度高的排水設計，增強項目靈活性，協助應對不同的降雨量和降雨頻率。
- To install floodgates in flood-prone areas.
在容易發生水災的區域安裝水閘。

Improve Performance of Equipment under High Temperatures

提高設備在高溫下的性能

- To introduce a thermodynamic model to conduct research to understand the long-term impact of high temperature and high humidity on project performance.
引入熱力學模型作出研究，了解高溫和濕對於項目性能的長期影響。

Rainwater Harvesting

雨水收集

- To increase rainwater-harvesting channels.
增加可收集雨水的渠道。

Transportation Route

運輸路線

- To reduce climate-related impacts that may affect the delivery of sludge and raw materials by emphasizing "efficiency" in the transportation route planning.
以效率為運輸路線規劃的大原則，盡可能減少氣候相關影響，避免其妨礙原材料與污泥的運輸需要。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略



Construction 施工

Sustainable Construction

可持續施工

- To select suitable low-carbon materials for construction.
選擇合適的低碳材料進行施工。
- To use biodiesel or electric equipment in construction projects and equipment to reduce carbon emissions.
在建項目及設備中使用生物柴油或電動設備，減少碳排放。



Operation and Management 運營及管理

Improve Flood Resilience of Operating Assets

提高運營資產的抗洪能力

- To review existing asset designs and operating models to identify and improve the flood prevention capability of building.
審查現有的資產設計和運營模式，辨別並改善建築物的防洪能力。

Assessing Climate Resilience of Utilities

評估公用行業的氣候適應能力

- To improve the climate adaptability of the public utilities, enterprises must maintain close communication with policy makers, timely reflect industry suggestions and implement policy directions and objectives.
要提升公用行業的氣候適應能力，企業必須與政策管理者保持緊密溝通，適時反映業內建議及落實政策之方向與指標。
- Accordingly, the Group will evaluate its projects, for example, explore the rational distribution and use of underground pipelines, and evaluate the legality and compliance of existing water control measures/projects.
據此，本集團會為其項目作出評估，例如，探索地下管道的合理分佈與使用、衡量現行治水措施／項目的合法合規性。

Capacity Building

能力建設

- To conduct professional training for all employees to increase their environmental awareness and their understanding on potential climate impacts.
為所有員工提供專業培訓，提升他們的環境意識，同時確保他們了解氣候的潛在影響。

Supply Chain: Implementing Climatic Guidance for Procurement

供應鏈：實施以氣候變化為依據的採購指引

- Where feasible, to procure equipment or assets that are more in line with sustainable development according to standardised procurement guidelines and by considering the current and future climate conditions.
在可行的情況下，把當前和將來的氣候條件納入考量，根據規範的採購指引選購更符合可持續發展的設備或資產。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Climate-Related Opportunities

氣候相關機遇

Categories 類別	Major Opportunities 主要機遇	Potential Financial and/ or Operational Opportunities 潛在財務及／或運營機遇	Management Approach 管理方針
Corporate Reputation 企業商譽	<p>ESG investments ESG投資</p> <p>Climate change brings ESG investment opportunities. Following the increase of green awareness among the investors, the ESG performance of the companies is one of the most important investment considerations.</p> <p>氣候變化帶來ESG方面的投資機遇。隨著投資者綠色意識增強，企業的ESG績效躍升為重要的投資考慮之一。</p>	<ul style="list-style-type: none"> Increase in asset value. 資產價值增加 Enhance the Group's reputation and competitiveness. 本集團聲譽及競爭地位提升 	<ul style="list-style-type: none"> To adopt international best practice standards in sustainability reporting. 在可持續報告中採用國際最佳實踐標準。 To increase data transparency and disclose more detailed ESG-related data. 增加資料透明度，披露更詳盡ESG相關數據。 To integrate ESG into the Group's operational considerations. 把ESG納入本集團的運營考慮。
Market Change 市場轉變	<p>Sustainable waste treatment solutions 可持續的污水處理方案</p> <p>In the context of climate change, sustainable water environment management solutions have become one of the important demands of the market. 在氣候變化的大環境下，可持續的水環境治理方案成為市場的主要需求之一。</p> <p>Just in time for the meeting, Everbright Water's business is aiming at reducing pollution and carbon, turning waste into energy, and smart water. The Group's governance promotes comprehensive water resources management, which is in line with market trends. 適逢其會，光大水務的業務正以降污減碳、轉廢為能、智慧水務為目標。本集團治理推動綜合水資源治理，符合市場趨勢。</p>	<ul style="list-style-type: none"> Increased demand for sustainable water management solutions. 對可持續水環境治理方案的需求大增 Enhance the Group's reputation and market standing. 本集團聲譽及市場地位提升 	<ul style="list-style-type: none"> Water environment management will continue to be the core business of Everbright Water. The Group will strengthen its efforts in technology R&D to unleash the synergistic effect of "Reducing Pollution and Carbon Emission" in water environment management projects. 水環境治理將繼續作為光大水務的核心業務。本集團將會加強技術研發，以發揮其在水環境治理項目中「減污降碳」的協同效應。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Metrics and Targets

The Group has formulated a greenhouse gas accounting framework in accordance with the CDM methodology under the *United Nations Framework Convention on Climate Change*, the *GHG Protocol Corporate Accounting and Reporting Standard*, and ISO 14064-1: 2018 *Greenhouse Gases – Part 1: Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*. Accordingly, it calculates the greenhouse gas emissions and offsets of each project. The Group has commissioned the Hong Kong Quality Assurance Agency as a third-party certification and audit agency to conduct independent audit and verification on the Group's greenhouse gas inventory during the Reporting Period in accordance with ISO14064-1. The relevant verification statement is appended to this Report. This demonstrates that Everbright Water is fulfilling its responsibility to manage, quantify and report greenhouse gas emissions, and has taken an important step towards promoting a low-carbon economy. In order to further improve its greenhouse gas accounting framework, the Group is establishing a Scope 3 greenhouse gas emission calculation framework in order to establish the overall environmental performance of the corporate value chain.

Data Calculation Method

The Group has calculated the greenhouse gas emissions and offsets by referring to the CDM methodologies *AM0080: Mitigation of Greenhouse Gases Emissions with Treatment of Wastewater in Aerobic Wastewater Treatment Plants (Version 1.0)*. In order to comply with the latest accounting standards at home and abroad, the Group further revised the calculation method and updated the emission factors quoted in the calculation in accordance with the *2006 IPCC Guidelines for National Greenhouse Gas Inventories (2019 Revision)*. Additionally, greenhouse gas emissions figures for air travel were calculated using the ICAO Carbon Emissions Calculator.

指標和目標

本集團按照《聯合國氣候變化框架公約》中 CDM 方法學、《溫室氣體核算體系：企業核算與報告標準》、ISO 14064-1:2018《溫室氣體 — 第一部分：組織層級溫室氣體排放和清除的量化和報告指南》之規範，制定出溫室氣體核算框架，並以此計算各項目的溫室氣體排放及抵銷量。本集團已委託香港品質保證局作為第三方核證審核機構，並按照 ISO14064-1 為本集團於報告期內的溫室氣體清單進行獨立審計及認證。其相關審核聲明已附載於本報告中，展示出光大水務正履行管理、量化及報告溫室氣體排放的責任，並為推動低碳經濟邁出重要的一步。為進一步完善光大水務溫室氣體核算框架，本集團正在建立範疇三溫室氣體排放計算框架，務求更加全面地確立企業價值鏈的整體環境表現。

數據計算方法

本集團已參照 CDM 方法《AM0080：透過在有氧污水處理廠處理污水減少溫室氣體排放（1.0版）》計算出溫室氣體的排放及抵銷量。為貼合國內外最新的核算標準，本集團進一步按照《2006年IPCC國家溫室氣體清單指南2019修訂版》修訂計算方法及更新計算內所引用的排放因子。另外，飛機差旅的溫室氣體排放數字為國際民航組織的碳排放計算器計算而得。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Greenhouse Gas Offsets

In order to summarise the Group's achievements in low-carbon transition, the Group also calculated the amount of greenhouse gas offsets of its operating projects. The Group achieves greenhouse gas offset mainly through the use of renewable energy, waste water nitrogen removal treatment process and plant greening. The relevant calculation methods are as follows:

Renewable Energy

The Group has been using biogas generated from anaerobic digestion of sludge to generate electricity, and also installed photovoltaic power generation facilities in the plant during the Reporting Period. The Group uses the CDM methodology to estimate and compare greenhouse gas emissions from the use of renewable energy and fossil fuel power plants to calculate the amount of carbon dioxide emissions offset by the Group's operations.

Nitrogen Removal through Waste Water Treatment Process

The nitrogen content of the waste water will affect the nitrous oxide emission of the effluent. Therefore, in order to reduce the release of nitrous oxide in the effluent, the Group has adopted a waste water nitrogen removal treatment process to improve water quality and indirectly offset greenhouse gas emissions. According to the *2006 IPCC Guidelines for National Greenhouse Gas Inventories (2019 Revision)*, the Group estimates and compares the nitrous oxide emissions of treated (nitrogen removal) and untreated waste water, then calculates the GHG emissions offset indirectly by treating waste water.

Greenery in the Facilities

In order to create a more comfortable and pleasant working environment, the Group actively promotes greenery, to enhance the employees' well-being. The Group has planted trees, flowers, shrubs and other plants in its project facilities, and calculated the number of trees planted in each project facilities. The Group also calculated the amount of carbon dioxide offset achieved by greenery in the projects during the Reporting Period, based on the annual carbon dioxide absorption of each mature tree published by the European Environment Agency.

溫室氣體抵銷

為總結本集團在低碳轉型方面的成果，本集團亦計算了運營項目的溫室氣體抵銷量。本集團主要透過利用可再生能源、污水除氮處理工藝和廠內綠化來達到溫室氣體抵銷，相關計算方法如下：

可再生能源

本集團一直使用污泥厭氧消化產生的沼氣發電，亦於報告期內新增了廠內光伏發電設施。本集團使用CDM的方法，估算和比較使用可再生能源及以化石燃料發電廠發電的溫室氣體排放量，從而計算本集團的運營所抵銷的二氧化碳排放量。

污水除氮處理工藝

污水的氮含量將影響出水的氧化亞氮排放量。因此，為了減少出水所釋放的氧化亞氮，本集團使用了污水除氮處理工藝改善水質，間接抵銷溫室氣體排放。本集團按照《2006年IPCC國家溫室氣體清單指南2019修訂版》，估算和比較經(除氮)處理及未經處理污水的氧化亞氮排放，再計算出經處理污水所間接抵銷的溫室氣體排放量。

廠內綠化

為帶來更舒適宜人的工作環境，本集團積極推動綠化工作，希望為環境和員工健康出一分力。本集團已於旗下項目廠內栽種樹木、花卉、灌叢等其他植物，並且統計了各個項目廠內所種植的樹木數量。本集團亦按照歐洲環境署公佈每棵成年樹木每年的二氧化碳吸取量，計算報告期內廠內綠化所達到的二氧化碳抵銷量。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Enhance Cities' Resilience Against Climate Change

As global climate change intensifies, the frequency and severity of various extreme weather events and natural disasters increase accordingly. Phenomena such as heat waves, droughts, and floods have brought intermittent challenges to cities, while long-term phenomena such as rising global temperatures and rising sea levels have brought inundation risks to some cities. All these big changes reflect the significant changes to the various hydrological conditions, which is very likely threatening the stability of water supply, energy supply and food. In order to meet this common challenge of human society, the Group attaches great importance to climate change response policies and measures. The Group has incorporated climate change risk into the existing Risk Management System, aiming to formulate more comprehensive emergency and natural disaster response plans to improve the resilience and recovery capabilities of business operations.

Based on the holistic view for water industry, the Group acknowledges that the fundamental of water resources management is on river basin management that focuses on recovery at its root causes. Therefore, through the provision of comprehensive water environment management services, the Group has carried out raw water protection, municipal waste water treatment, industrial waste water treatment, wastewater pipeline network construction, reusable water and sludge treatment and disposal projects, etc., in order to alleviate the pressure on urban water supply, reduce harmful pollutants from the source, and protect water bodies and terrestrial ecology. The Group has also established a system for surface runoff control and flood control and drainage. The Group implements project construction based on the direction of "pollution in the water, root cause on the shore" by strengthening the city's resilience against floods, and contributing wisdom and strength to the construction of sustainable cities and communities.

提升城市應對氣候變化的抗禦能力

隨著全球氣候變化日趨嚴重，各類極端天氣事件和自然災害的發生頻率和嚴重程度都隨之增加。熱浪、乾旱、洪水等現象已為城市帶來間歇性的打擊，而全球整體氣溫上升、海平面上漲等長期現象更是為部份城市帶來淹沒風險。這些變化的程度之大，意味著各類水文條件已經大幅改變，並極大可能威脅到水、能源、食物三大資源的穩定供給。為迎接這個人類社會的共同挑戰，本集團高度重視氣候變化應對政策措施。本集團已將氣候變化風險納入現有的風險管理體系中，希望制定更完善的緊急與自然災害應變方案，提高業務運營韌性及恢復能力。

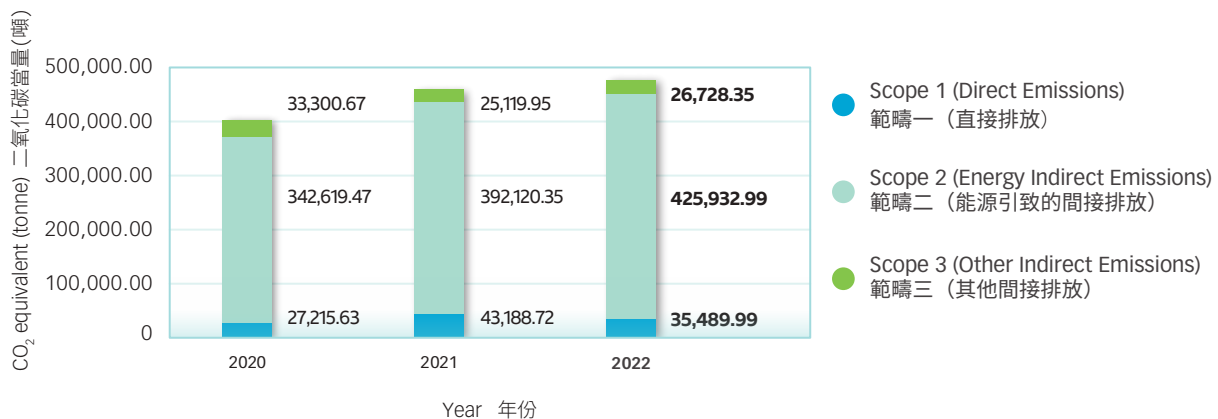
本著水務整全觀，本集團深明水資源治理的根本在於標本兼治的全流域治理。因此，透過推出水環境綜合治理服務，本集團開展了原水保護、市政污水處理、工業廢水處理、污水管網建設、中水回用及污泥處理處置項目等，希望緩減城市供水壓力之餘，從源頭降低有害污染物，保護水體和陸上生態。本集團亦建立了控制表面徑流和防洪排澇的系統，以「污染在水裡、根源在岸上」的政策思路推進項目建設，加強城市應對水患的抗禦能力，並為建設可持續城市和社區貢獻智慧和力量。

Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

In 2012, China introduced the concept of modern rainwater management “sponge city” into water resources management, in order to simulate the natural water cycle with urban flood drainage and put concepts of “following the nature and adapting with flexibility” into practice. Henceforth, the idea of integrated flood control has become increasingly popular and common. For the purpose of urban flood control and drainage upgrading, the operators will take a holistic view by considering the six guidelines of “seepage, stagnation, storage, purification, use, and drainage”. In the “Sponge City” project that it participated in, the Group assisted a series surface runoff controls and ecological environment management, in order to improve a city’s abilities in absorption, infiltration, retention, release and purification of rainwater and strengthen urban waterlogging prevention and control, pollution reduction and reusable of rainwater. In particular, the Zhenjiang Sponge City Project has adopted green infrastructure and responded to waterlogging problems such as flood disasters and early rain pollution to ensure that Zhenjiang City can still operate safely and as usual even when facing a once-in-50-year rainstorm. In 2021, Zhenjiang Sponge City Project participated in the UNECE “Building Back Better Infrastructure Award” and was recognised as a top five project in the UNECE “Building Back Better Infrastructure Award”. As one of the best “People-first” PPP projects, the project was showcased at the UNECE 5th International PPP Forum.. In 2022, the Group’s operating projects offset a total of 113,321.17 tonnes of carbon dioxide equivalent emissions.

二零一二年，中國把現代化雨水管理的概念「海綿城市」引入水資源治理，寄望城市排洪能夠模擬大自然水循環，達致「順應自然，彈性適應」。因此，整合防洪管理的方式亦越來越普及，在城市防洪排澇改造時，管理者一般會參照「滲、滯、蓄、淨、用、排」六個方針進行綜合考量。在參建的「海綿城市」項目中，本集團協助建造了一系列控制表面徑流和生態環境治理的工程，銳意提升城市吸納、蓄滲、緩釋和淨化雨水的功能，並加強城市的內澇防治、污染削減及雨水再用。當中鎮江海綿城市項目更活用了綠色基礎設施，並針對洪澇災害和初雨污染等積水問題作出應對，確保鎮江市在五十年一遇的暴雨天氣之下仍能安全如常運作。在二零二一年，該項目亦有幸參與聯合國歐經會「更好重建」基礎設施獎項(Building Back Better Infrastructure Award)的評選該項目獲得了五強的優異成績，並作為最佳「以人為本」(People-first) PPP項目之一在聯合國歐經會第五屆國際PPP論壇上進行案例展示。二零二二年，本集團的運營項目共抵銷了113,321.17噸二氧化碳當量排放。

GHG Emissions by Scope in 2022
二零二二年按範疇劃分的溫室氣體排放



Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Notes:

- 1 The calculation of GHG emissions from operating projects is referenced to CDM methodology *AM0080: Mitigation of Greenhouse Gases Emissions with Treatment of Wastewater in Aerobic Wastewater Treatment Plants (Version 1.0)*, *GHG Protocol Corporate Accounting and Reporting Standard*, ISO 14064-1:2018: *Greenhouse Gases – Part 1: Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*, and *2006 IPCC Guidelines for National Greenhouse Gas Inventories (2019 Revision)*.
- 2 The calculation of scope 1 emissions covers all of the operating waste water treatment projects' fugitive methane emissions, nitrous oxide emissions from biological treatment process and direct emissions released from the direct use of fuel.
- 3 The calculation of scope 2 emissions includes the indirect emissions from purchased electricity consumption. The calculation boundary of scope 2 emissions covers all the waste water treatment projects, reusable water projects, waste water source heat pump projects, sludge treatment and disposal projects, water supply projects, leachate treatment project and water environment management projects that were under construction and operation.
- 4 The calculation of scope 3 emissions includes fuel consumption for the transportation of sludge by third parties, indirect emissions from air travel by employees and nitrous oxide released from effluent. GHG emissions from air travel are calculated by using International Civil Aviation Organization Carbon Emissions Calculator.

To facilitate clients' GHG reporting, this Report discloses the GHG emissions caused by electricity consumption during waste water treatment, and integrates the "emission factor" and "emission intensity factor" based on its potential impact. A breakdown of the figures is available in the "Key Figures" section of this Report.

附註：

- 1 本集團的溫室氣體計算參照CDM方法《AM0080：透過在有氧污水處理廠處理污水減少溫室氣體排放（1.0版）》、《溫室氣體核算體系：企業核算與報告標準》、及ISO 14064-1:2018《溫室氣體 — 第一部分：組織層級溫室氣體排放和清除的量化和報告指南》之規範，並參考《2006年IPCC國家溫室氣體清單指南2019修訂版》核准的計算方法。
- 2 範疇一的計算包括所有運營中的污水處理項目的無組織甲烷排放、生物處理過程中的氧化亞氮排放及經直接使用燃料而產生的直接排放。
- 3 範疇二的計算為經使用外購電力而產生的間接排放。範疇二的計算邊界包括所有在建與運營中的污水處理、中水回用、污水源熱泵、污泥處理處置、供水、滲濾液處理項目與水環境治理項目。
- 4 範疇三的計算包括第三方污泥運送的燃油消耗、員工飛機差旅的間接排放及從出水中釋放的氧化亞氮。飛機差旅的溫室氣體排放以國際民航組織的碳排放計算器計算得出。

為了方便客戶進行報告，本報告綜合了處理污水時因電耗造成的溫室氣體排放，並根據其潛在影響統整出「排放因子」及「排放強度因子」。數據明細可在本報告的「主要數據」章節中獲得。

**WE PROTECT
LUSH MOUNTAINS
AND LUCID WATER,**
AND DEVOTE TO
IMPLEMENTING
GREEN COMMITMENTS

保護青山綠水，
致力實踐綠色承諾



Environmental Responsibility 環境責任

“Being Devoted to Ecology and Environment for a Beautiful China” is the corporate mission that Everbright Water has adhered to for many years.

With the goal of promoting the construction of national civilisation, the Group is committed to contributing to the sustainable development of cities and communities. Keeping pace with the times, Everbright Water relentlessly promotes innovation and technology development, and applies advanced waste water treatment technology to provide professional and comprehensive water management services. The Group has drawn up a blueprint for business development from the perspective of environmental compliance, and continues to improve resource utilisation and environmental performance. In addition to improving operational efficiency, these measures could also strengthen the Group’s resilience to climate change and realise the vision of co-existence and harmony between projects and the natural environment.

In order to understand the local community and their views on various environmental impacts of the projects, the Group has established an effective compliant mechanism for each and every project to promote effective communication. Such mechanism can allow the Group to address the concerns and complaints of local communities regarding the environmental impact of its project activities. During the Reporting Period, the Group did not receive any complaints related to environmental impact and nuisance.

The Group promotes industrial reform and structural upgrading by actively exploring innovative technologies. To minimise the impact of harmful pollutants on the ecological environment, the Group also utilises comprehensive testing and management systems to ensure the green implementation of projects.

The Group is deeply committed to protecting the water environment in China and will continue its efforts on advancing pollution prevention and ecological protection. The Group strives to making greater contributions to improving the water ecosystem and better serving the local communities.

「情繫生態環境，築夢美麗中國」是光大水務多年以來所堅守的企業使命。

本集團以推動國家生態文明的建設為目標，致力為城市和社區的可持續發展作出貢獻。光大水務與時並進，持續不懈地推動創科發展，應用先進的污水處理技術以提供專業卓越的水環境綜合治理服務。本集團從環保合規的角度勾畫企業發展藍圖，持續提高資源利用率及環保表現，除了提升運營效益外，更可強化本集團應對氣候變化的韌性，實現項目與自然環境雙生共融的願景。

為建立有效的溝通渠道並了解當地社區人士對項目所帶來環境影響的意見，本集團各個項目均已設立有效的申訴機制，以處理受影響人士對項目活動環境影響的關注和投訴。報告期內，本集團並未收到任何與環境影響和滋擾相關的投訴。

本集團積極探索創新科技，推進產業改革及產業結構升級，以綜合檢測管理體系為項目的綠色實施保駕護航，最大限度減少有害污染物對生態環境的污染。

本集團深耕中國水環境領域，將繼續推進污染防治及生態環境的保護工作，致力為改善水生態系統及求更好地服務人民作出更大貢獻。

Environmental Responsibility 環境責任

Environmental Management Approach

Amidst the increasingly environmental challenges, the Group keeps pace with the country by strictly complying with the latest environmental laws and regulations promulgated by the government, and actively responds to the government's initiatives to contribute to management and protection of the ecological environment. The Group continues improving its environmental management policy system and uses it as a guide to refine its work and responsibilities to ensure its sustainable development.

Policy and System

Under the leadership of a dedicated and competent management team, the Group upholds the sustainable development philosophy of "Taking Quality as the Top Mission and Keeping Efficiency as the Priority with Support by Scale" and strictly enforces the *Corporate Policies on Environmental Management* formulated by Everbright Water.

環境管理方針

面對日益嚴峻的環境挑戰，本集團緊跟國家步伐，嚴格遵循政府最新頒佈的環境法規，積極響應政府號召，為生態環境治理與保護添磚加瓦。本集團持續完善環境管理政策體系，以指導細化工作內容及責任落實，確保本集團的可持續發展。

政策及體系

在敬業精幹的管理團隊的帶領下，本集團秉持「品質第一、效益優先、規模助力」的可持續發展理念，嚴格遵守光大水務所訂立的《環境管理企業政策》。

Corporate Policies on Environmental Management – The policies defined the important principles for the Group to implement environmental management and minimise the negative implications on the environment and natural resources. They also provide detailed guidance on the environmental impacts associated with the Group's operations.

環境管理企業政策— 該等政策為本集團落實環境管理提供了重要綱領，爭取最大程度降低本集團對環境及自然資源可能造成的負擔。該政策亦對本集團運營中所涉及的環境影響提供詳細指引。

Six key areas of the policies:
政策的六大核心：



Compliance
合規



Risk management and due diligence
風險管理和盡職調查



Environmental protection
環境保護



Health and safety
健康和安全



Supply chain management
供應商管理



Monitoring and communication
監測和溝通

Six key environmental guidelines of the policies:
政策提出的六大環境指引：

Air and GHG emissions
廢氣及溫室氣體排放

Discharges into water bodies and land
向水及土地的排污

Generation and disposal of hazardous and non-hazardous waste
有害及無害廢棄物的產生及處置方法

Energy
能源

Water resources
水資源

Use of raw materials
原材料使用

Environmental Responsibility 環境責任

The Group has established the following commitments to implement the concept of sustainable development:

- Implementing the environmental management system with full capacities
- Having all environmental protection policies approved by the Senior Management or the Board
- Developing a more comprehensive GHG audit framework
- Setting more realistic carbon reduction targets
- Strictly monitoring the Group's environmental performance
- Striving to protect the environment
- Striving to promote environmental awareness
- Effectively utilising natural resources and energy
- Striving to reduce the generation of wastes and emissions
- Actively engaging with various stakeholders regarding environmental protection topics
- Actively reporting on environmental matters

In order to standardise the operating practices of its projects, incorporate social responsibility into its business operation process and daily enterprise management and uphold corporate social responsibilities, the Group has formulated and implemented the ESHS Management System, Risk Management System and "Intelligent Water" Information Management System.

While continuously improving the ESHS Management System and Risk Management System, the Group has formulated the *Contractors ESHS Management Measures* to ensure that suppliers and contractors comply with its environmental management policies. These two management systems provide more comprehensive frameworks and regulations, effectively reducing the probability of risks occurrence and ensuring the fulfillment of environmental social responsibilities in both upstream and downstream of the supply chain.

本集團為實踐可持續發展理念，定立了以下承諾：

- 堅決落實環境管理系統
- 環保政策均由高級管理層或董事會許可
- 制定更加全面的溫室氣體審計框架
- 設立更切實的減碳目標
- 嚴格監控本集團的環保表現
- 致力保護環境
- 致力推廣環保意識
- 有效地使用天然資源和能源
- 致力減少廢物及排放的產生
- 積極與各持份者討論環保相關議題
- 主動提交環境相關事項的報告

為規範本集團項目的經營實踐，將社會責任落實到業務運營過程和企業日常管理當中，本集團制定並實施了ESHS管理體系、風險管理體系及「智慧水務」信息管理體系。

本集團持續優化ESHS管理體系和風險管理體系，並制定了《承包商ESHS管理標準》，以確保供應商和承包商遵守本集團的環境管理政策。這兩大管理體系為企業運作提供了全面的指導及規範，有效降低風險發生的概率，確保供應鏈上下游對環境社會責任的履行。

Environmental Responsibility

環境責任

The Group also actively responded to the country's "Achieving Carbon Neutrality" policy by promoting the large-scale application of the "Intelligent Water" Information Management System which automatically controls and systematically optimises the operation of waste water treatment plants and their electricity consumption. As such, the Group is able to further achieve energy saving and emission reduction, laying a solid technological foundation to implement green strategies in the future.

The Group upholds the business philosophy of green development and considers environmental performance as a key indicator for assessing the operation of its projects. All of the Group's projects have obtained or are actively applying for various relevant system management certificates, including ISO 9001 Quality Management System, ISO 14001 Environmental Management System and ISO 45001 Occupational Health and Safety Management System. In addition, the Group will analyse and evaluate the projects' environmental and social risks prior to investment, and will ensure all necessary permits and environmental assessment reports approvals are duly obtained prior to the commencement of construction.

本集團亦積極響應國家的「碳中和」政策，推動「智慧水務」信息管理系統的大規模應用，智慧把控和系統性優化污水處理廠的運行和用電耗能，進一步節能減排，為實施未來綠色戰略奠定科技基礎。

本集團以綠色發展為經營理念，視環境表現為項目投運的一大重要評估指標。本集團旗下所有項目均已獲得或正在積極申請各項相關體系管理證書，包括ISO 9001質量管理體系、ISO 14001環境管理體系及ISO 45001職業健康安全體系。此外，本集團在投資項目之前均會篩查其環境及社會風險，並確保於施工前獲得所需的許可及環評報告批覆。

Environmental Management System Requirements 環境管理體系要求	Description 描述
Monitoring, measurement, analysis and evaluation 監督、量測、分析與評估	Monitor, measure, analyse and evaluate the environmental performance. 監督、量測、分析與評估其環境績效。
Leadership and Commitment 領導與承諾	Top management should assess the effectiveness of the environmental management system, ensuring 1) the consistencies between existing environmental protection policies and the Group's overall strategic direction, 2) proper implementation and execution at the operational level, and, 3) compliance with the environmental management system requirements and environmental awareness being effectively communicated and consistently prioritised. 最高管理層應評估環境管理系統的有效性，確保1)現有環保政策與本集團的戰略方向一致，2)在運營層面的正確實施和執行，以及3)有效地傳達並始終如一地優先考慮遵守環境管理系統要求和環境意識。
Internal and external audit 內部和外部審核	Conduct internal and external audits at planned intervals to determine its compliance with the environmental management system and international standards. 按規劃的時間間隔進行內部和外部審核，以判斷是否符合環境管理系統及國際標準的要求。

Environmental Responsibility
環境責任

Environmental Management System Requirements 環境管理體系要求	Description 描述
Training and awareness 培訓和認知	Provide appropriate training on environmental management system so that employees thoroughly understand the Group's environmental policies and the potential environmental impacts associated with individual operations. 提供適當的環境管理系統相關培訓，讓員工透徹了解本集團的環境政策和個別運營潛在的環境影響。
Remedial actions 矯正措施	Take appropriate actions in response to non-compliance and according to the severity of environmental damage. 針對不合規情況並根據對環境破壞的嚴重程度採取適當的行動。
Roles and responsibilities 角色和職責	Clarify the respective roles and responsibilities within the environmental management system. 釐清環境管理系統內各自的角色和職責。
Legal register and environmental impact register 法律法規登記冊和環境影響登記冊	Clearly define, maintain and regularly update all applicable laws, regulations and other requirements. Prepare and update the environmental impact register based on the Group's activities, products and services. 清晰界定、維持及定期更新所有適用的法律法規和其他要求，以及根據本集團的活動、產品及服務來編製及更新環境影響登記表。
Environmental objectives 環境目標	Establish environmental objectives, consider the embedded risks and opportunities, and set deadlines to achieve these objectives. 建立環境目標，考量隱含的風險和機會，並設立達到目標的限期。
Compliance with regulations 遵守法規	Evaluate the status of compliance according to the relevant regulations and take appropriate actions as needed. 評估遵守法規的狀態並按需採取適當的行動。
Environmental performance records 環境績效記錄	Properly maintain records documenting the monitoring, measurement, analysis and evaluation of environmental performance. 妥善保存記錄環境績效的監督、量測、分析與評估的文件。

Environmental Responsibility

環境責任

Occupational Health and Safety Management System Requirements 職業健康與安全管理系統要求	Description 描述
Regular training 定期培訓	Provide regular training on occupational health and safety management system so that employees fully understand the Group's related policies. 定期提供職業健康與安全管理系統相關培訓，使員工充份了解本集團的政策。
Occupational health and safety objectives 職業健康安全目標	Establish occupational health and safety objectives, and commit to 1) providing safe and healthy working conditions to prevent any work-related injuries and health damage, 2) complying with applicable laws, regulations and other requirements, and 3) involving employees and employee representatives in the decision-making process relating to the occupational health and safety management system. 建立職業健康安全目標，並承諾1)提供安全健康的工作條件以預防與工傷和健康損害，2)遵守適用的法律、法規和其他要求，及3)讓員工和員工代表參與職業健康安全管理體系決策過程等。
Internal and external audit 內部和外部審核	Conduct internal and external audits at planned intervals to determine its compliance with the occupational health and safety management system and international standards. 按規劃的時間間隔進行內部和外部審核，以判斷是否符合職業健康與安全管理系統及國際標準的要求。
Occupational health and safety policy 職業健康安全政策	Top management formulates, implements and maintains occupational health and safety policies upon discussion with employees at all levels of the Group. 經本集團各級員工協商後，最高管理層制定、實施、及維持職業健康安全政策。
Leadership and commitment 領導與承諾	Top management assesses the applicability, adequacy and effectiveness of the occupational health and safety management system at planned intervals, and analyses if the occupational health and safety performance could meet the established objectives. 最高管理層按規劃的時間間隔對職業健康與安全管理系統的適宜性、充分性和有效性進行評估，分析職業健康安全績效能否達到既定目標。

Environmental Responsibility 環境責任

Occupational Health and Safety Management System Requirements 職業健康與安全管理系統要求	Description 描述
Monitoring, measurement, analysis and evaluation 監督、量測、分析與評估	Monitor, measure, analyse and evaluate the occupational health and safety performance. 監督、量測、分析與評估職業健康安全績效。
Hazard identification and risk assessment 危險源辨識和風險評價	Establish and implement ongoing and proactive processes for hazard identification so that associated occupational health and safety risks could be properly considered, mitigated and effectively managed. 建立和實施持續及主動的危險源辨識程序，以便適當考慮、減輕和有效管理相關的職業健康安全風險。
Emergency Preparedness and Response 應急準備和響應	Identify potential emergencies and assess resulting occupational health and safety risks to prevent or minimise any negative consequences. 識別潛在的緊急情況，並評估由此產生的職業健康安全風險，以防止或盡量減少任何負面後果。

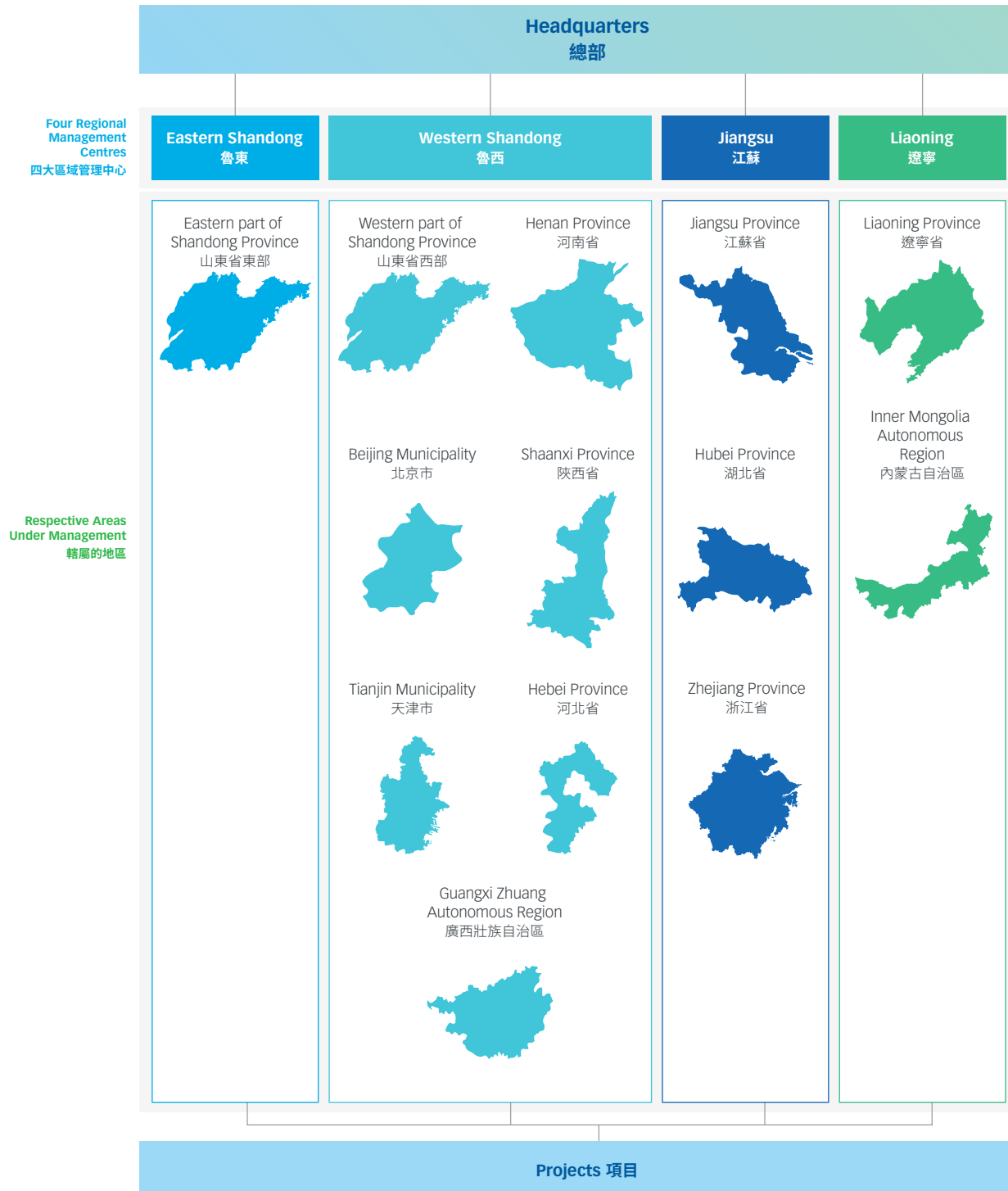
Responsibilities and Division of Labour

In order to effectively implement the core management concepts and policies, the Group has established a clear division of work to systematically clarify various responsibilities. Four regional management centres have been set up in Eastern Shandong, Western Shandong, Jiangsu and Liaoning respectively, complementing the Group's three-tier management model comprising the headquarters, regional management centres and local projects. The Group is therefore able to effectively conduct safety and environmental management for each and every project company. These measures enable corporate resources utilisation according to project localities and enhance the inter-regional communications. They also significantly fostered decision-making and strengthened risk management capabilities via increased environmental management efficiencies and maximised operational benefits.

責任與分工

為保證其核心理念與政策的有效落實，本集團已建立明確的分工，系統地釐清各項職責。本集團分別在魯東、魯西、江蘇和遼寧設立了四大區域管理中心，與本集團總部—區域管理中心—項目的三級管理模式相輔相成並在各區域和項目公司層面設置了安全與環境管理機構，可根據不同地區的項目特點優化資源分佈，加強區域之間的溝通交流，提高環境管理效率及經營效益，從而大幅提升其整體的決策運行效率和風險管控能力。

Environmental Responsibility 環境責任



Note: Only projects in operation are managed by the Regional Management Centres while projects in preparatory stage or under construction are managed by the Construction Centre of the Group.

附註： 僅運營項目由區域管理中心管理，籌建項目或在建項目由本集團的工程中心管理。

Environmental Responsibility 環境責任

Environmental Disclosure

The Group strives to provide the public with transparent, reliable and comprehensive environmental performance associated with its project operations, such as environmental impact assessment reports, annual environmental monitoring plans, environmental emergency preparedness and response plans, and waste water/sludge/air/noise monitoring results. All reports are publicly accessible via Everbright Water's corporate website and/or relevant local official websites. At the same time, the Group actively opens its waste water treatment facilities for public visits in response to requirements of the Ministry of Ecology and Environment and the Ministry of Housing and Urban-Rural Development of the PRC so as to promote environmental protection to the general public while accepting monitoring from the public.

Environmental-Friendly Design

Everbright Water considers the potential impact of projects on the overall water cycle and ecosystem as early as in the process of planning and designing. Eco-friendly elements are also incorporated into the designs to address ecosystem resilience, flood risk, water security, water pollution and other environmental concerns. To support ecological protection and management of lakes and river basins, the Group is dedicated to improving the effluent quality of waste water treatment projects. The Group's river-basin ecological restoration projects play an important role in improving the water quality of river basins by providing a series of river-basin ecological restoration services such as river dredging, waste water outfall improvement, and riverside environment enhancements. These improvements also provide suitable habitats for wild animals and plants on the riverbanks and contribute to the protection of biodiversity.

In addition, the Group attaches great importance to the impacts of projects on the local residents. Therefore, when planning each project, the potential impacts of the project on local residents are fully considered, and the impacts on other public facilities and roads are minimised to ensure a sustainable and uncompromising quality of life.

環境披露

本集團堅持主動對外披露透明、可靠的項目運營環境績效，如環評報告、年度環境監測計劃、突發環境事件應急預案、廢水／污泥／廢氣／噪聲監測結果等。此類信息可於光大水務網站或當地官方指定網站查閱。同時，本集團積極響應中國生態環境部及住房和城鄉建設部的要求，加入光大水務環保設施整體開放計劃，向公眾開放污水處理設施，對大眾進行環保宣傳與科普，主動接受社會監督。

環境友善設計

在項目規劃及設計過程中，光大水務會考慮項目對整體水循環及生態系統的潛在影響，並將生態友好元素融入設計，以應對生態系統復原力、洪水風險、水資源安全、水質污染及其他環境問題。本集團致力於提高污水處理項目的出水水質，助力湖泊及河流流域的生態環境保護和治理。本集團的河道流域治理項目通過提供河流疏浚、排污口整治、沿河環境提升等一系列河道流域治理服務，對改善河流流域水質發揮重要作用；項目亦透過綠化坡岸改善沿河的環境，為河岸的野生動植物提供合適的生存環境，為保護生物多樣性作出貢獻。

本集團亦相當重視項目對當地居民的影響，因此在規劃每個項目時充分考慮項目對當地居民的潛在影響，並致力把對其他公用設施及道路的影響減至最低，以確保持續和不受影響的生活質量。

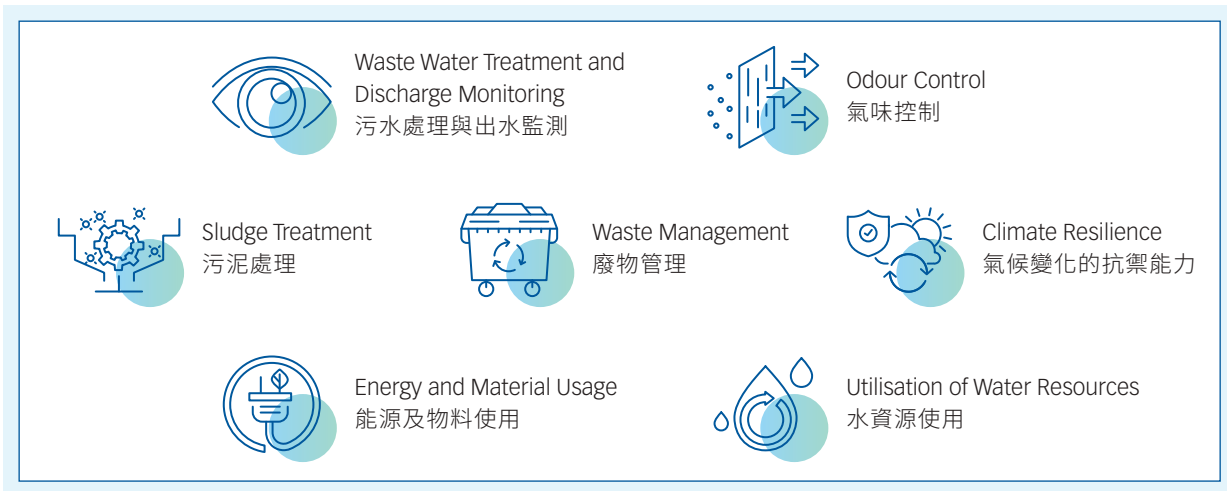
Environmental Responsibility 環境責任

Environmental Performance

As a leading water environment management enterprise in China, the Group is extra cautious regarding its project compliance. The Group upholds the highest degree of professionalism and strictly comply with the relevant standards and requirements. In addition, the Group has chosen the best-fitting waste water treatment processes to continuously improve the quality and hygiene of freshwater resources in China while substantially minimising the environmental impacts brought by untreated waste water discharge. The Group also takes into consideration the livelihood of surrounding communities and adopts appropriate alleviation measures in response to potential "Not in My Back Yard" nuisance. During the Reporting Period, there was no record of breach of the relevant laws and regulations that would have a significant impact on the Group. In view of its business nature, the Group reported its environmental performance in the following seven aspects:

環境表現

作為中國領先的水環境綜合治理企業，本集團對項目合規性格外謹慎。本集團秉承最高的專業精神，嚴格遵守相關標準和要求。本集團亦已選用最合適的污水處理工藝，持續改善中國的淡水品質和衛生狀況，最大限度減少污水排放對環境帶來的負面影響。本集團亦致力將項目實施與周邊社區的民生相結合，採取充分、適當的緩解措施以化解「鄰避效應」。報告期內，本集團無任何因違反相關法律法規而造成重大影響的記錄。根據業務性質，本集團依據以下七個範疇報告其環境表現：



Environmental Responsibility 環境責任

Waste Water Treatment and Discharge Monitoring

As a water environment management service provider, quality and quantity of waste water treatments are the Group's top priority. The Group, through its nationwide operations, has established a mature network with sophisticated water management. The Group actively promotes the development of "Intelligent Water" which entails an upgrading of water resources protection measures, constructions of sludge treatment and disposal facilities, and quality enhancement of municipal waste water pipeline network. By adopting stringent effluent standards for the Group's waste water treatment projects, the majority of the Group's projects comply with or are better than the Grade 1A standard of the *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002). Therefore, environmental damages caused by the discharge of effluent are minimised and public health and the sustainability of water environment are safeguarded.

Waste Water Treatment Process and Performance Indicators

In order to ensure compliance with discharge standards, Everbright Water introduced a series of waste water treatment technologies to remove water pollutants through physical, chemical and biological processes. Its waste water treatment projects mainly include pre-treatment, primary treatment, secondary treatment and tertiary treatment. Pre-treatment removes solid wastes from the waste water via screening and de-gritting. Primary treatment removes settleable suspended solids from the waste water through sedimentation processes and chemical are added to enhance the removal efficiency. These treatment processes can reduce SS, COD and biological oxygen demand ("**BOD**"). Secondary treatment is a biological treatment process in which the organic pollutants are decomposed by micro-organisms, which can further remove SS, COD and BOD, and achieve the removal of nitrogen and phosphorus. Tertiary treatment is the highest level of treatment that suppresses organic pollutants, SS and nutrients through UV radiation, chlorination/de-chlorination and other post-treatment waste water disinfection means.

污水處理與出水監測

作為水環境治理服務商，提供高質量水處理服務是本集團的首要任務。本集團通過遍佈全國多地的項目，搭建起成熟的業務網絡，並積極推動「智慧水務」建設、水資源安全保護措施升級、污泥處理處置設施建設、城鎮污水管網提質等產業升級工作。本集團對污水處理項目採用嚴格的出水標準，大部分項目的出水水質嚴格執行甚至優於《城鎮污水處理廠污染物排放標準》(GB18918-2002)一級A標準，大幅度降低污水排放對環境造成的損害，保障公眾的健康與水環境的可持續。

污水處理流程及表現指標

本集團採用了一系列的污水處理技術，結合物理、化學及生物過程除污淨水，以達到排放標準。本集團的污水處理流程主要包括預處理、一級處理、二級處理及三級處理。在預處理階段，污水中的固體廢物和砂礫透過隔濾移除。在一級處理中，使用沉澱過程去除污水中可沉澱的懸浮固體，並添加化學物質以強化除污的效果。該處理程序可減少污水中懸浮固體、化學需氧量及生化需氧量。二級處理為生物污水處理程序，利用微生物分解污水中的有機污染物，進一步降低污水中懸浮固體、化學需氧量及生化需氧量，並達到脫氮除磷。三級處理是最後一道除污淨水程序，利用紫外線、加氯／除氯處理或其他方法為處理後的污水消毒，將有機污染物、懸浮固體和營養物減至極低水平。

Environmental Responsibility

環境責任

The performance indicators of the Group's waste water treatment projects are listed as follows:

以下為本集團的污水處理項目表現指標：

Unit: Tonne

單位：噸

Screenings removed from waste water 從污水中移除的隔濾物量 10,931.16	Grits removed from waste water 從污水中移除的沙礫量 7,759.34	Suspended solids (SS) removed from waste water 從污水中移除的懸浮固體量 377,531.21
Chemical oxygen demand (COD) removed from waste water 從污水中移除的化學需氧量 433,453.75	Biochemical oxygen demand (BOD) removed from waste water 從污水中移除的生化需氧量 191,572.57	Total phosphorus (TP) removed from waste water 從污水中移除的總磷量 6,491.05
Total nitrogen (TN) removed from waste water 從污水中移除的總氮量 50,172.70	Ammoniacal nitrogen (NH ₃ -N) removed from waste water 從污水中移除的氨氮量 50,128.67	

Improving Discharge Standards

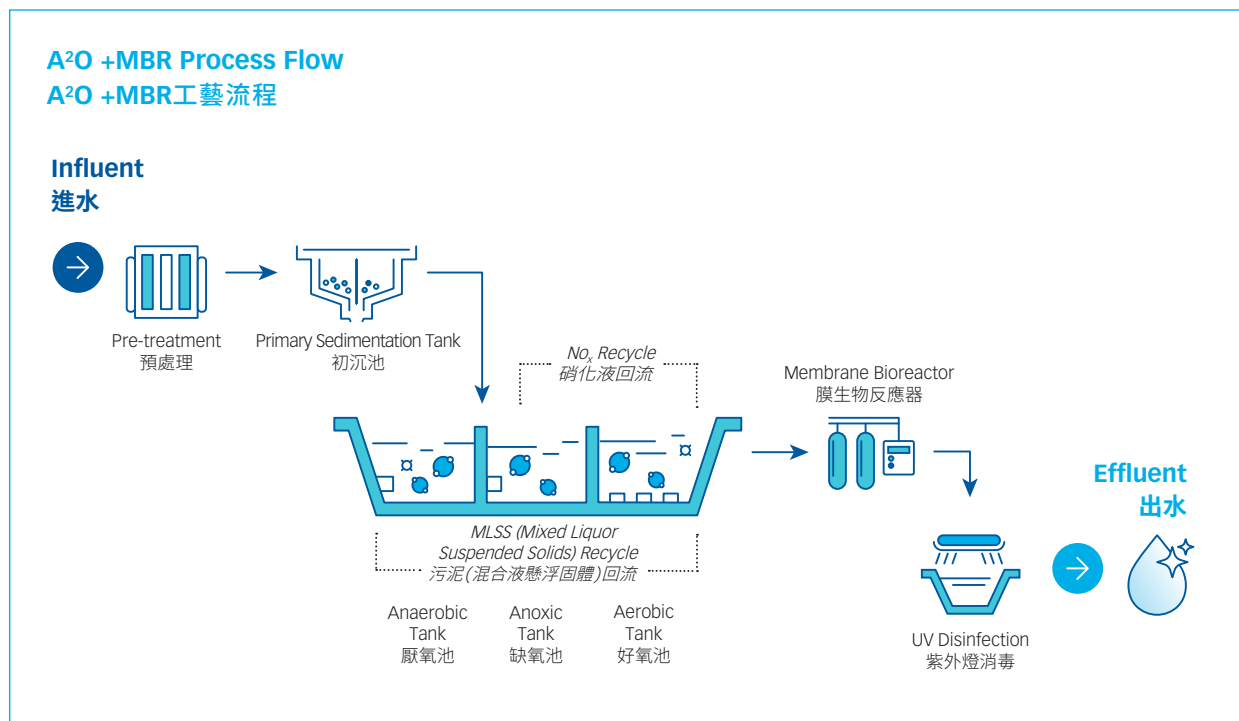
提升出水標準

Anaerobic-Anoxic-Aerobic ("A²O") Process and Membrane Bioreactor ("MBR")

厭氧-缺氧-好氧法 ("A²O") 工藝+膜生物反應器 ("MBR")

Ji'nan Waste Water Treatment Project is the first project in a provincial capital city in China that fully complies with the national Grade 1A standard for its discharged water. It is also a "National Municipal Golden Cup Demonstration Project" and has, for two consecutive years, won the national waste water treatment competition for 36 large-and medium-sized cities organised by the Ministry of Housing and Urban-Rural Development of the PRC. In addition to the expansion projects for the Ji'nan Waste Water Treatment Plants 1 and 2 and Ji'nan Tangye New Area Waste Water Treatment PPP Project which have been in operation for the past two years, Ji'nan East Station Area Underground Waste Water Treatment Project has also adopted the process of pre-treatment, A²O, MBR and UV disinfection to improve the discharge standards and stability. The A²O plus MBR technology combines the merits of both processes, enabling effective removal of nitrogen, phosphorus and other main pollutants which improve effluent capabilities and stability.

山東濟南污水處理項目是國內首個省會城市全部執行國家一級A排放標準的項目，亦是「國家市政金杯示範工程」，曾連續兩年獲中國住房和城鄉建設部組織的全國36個大中城市污水處理評比第一名。除了已投產近兩年的濟南污水處理項目一廠、二廠的擴建項目及濟南唐冶新區污水處理PPP項目外，濟南東站片區地下污水處理項目亦採用了預處理+A²O工藝+MBR+紫外線消毒的除污工藝，結合多種技術優點，能夠同時達到脫氮除磷，以提高出水標準及穩定性。



Environmental Responsibility 環境責任

Nanning Shuitang River Water Quality Treatment Plant EBAF® Generation III Aeration Biofilter Tank

Located in Guangxi Zhuang Autonomous Region, the Group's Nanning Shuitang River Water Quality Treatment Plant utilises EBAF® aeration biofilter as the main biochemical treatment method to facilitate the treatment processes with high filtration rate and loading capabilities. Under the conditions where the influent water quality has low carbon to nitrogen ratios, the EBAF® aeration biofilter is able to complete the coating and domestication processes in only 50 days under the winter water temperature of about 20°C. At the meantime, under dynamic controls of carbon injection and reflux ratio, the effluent indexes all meet the Grade 1A standard of the *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002). The fast activation and stable operation of this technology have provided a new technology direction and positive experience feedback on the treatment of innovative insights and positive experiential feedback for the southern domestic waste water with low concentration.

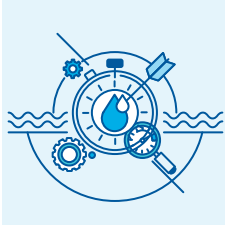
南寧水塘江水質淨化廠EBAF®第三代曝氣生物濾池

本集團位於廣西壯族自治區的南寧水塘江水處理廠採用EBAF®曝氣生物濾池作為主要生化處理方式，實現高過濾率和負荷能力的處理工藝。在低碳氮比的進水水質條件下，EBAF®曝氣生物濾池可在冬季水溫約為攝氏20度的情況下，50日即完成掛膜與馴化，同時，經過動態控制碳源投加量和回流比後，出水各項指標均滿足《城鎮污水處理廠污染物排放標準》(GB18918-2002)的一級A標準。這個技術的快速啟動、穩定運行，可為處理低濃度南方生活污水提供新的工藝思路和調試運行經驗，獲取積極的經驗反饋。



Everbright Water's Measures on Effluent Quality Control

光大水務在控制水質方面的舉措



Continuous Effluent Monitoring System

持續出水監測系統

All of the Group's waste water treatment projects have installed continuous water monitoring systems which are able to promptly, accurately and continuously record effluent data.

本集團已在所有污水處理項目安裝了持續出水監測系統，以便能夠迅速、可靠和持續地記錄出水水質數據。



Regular Monitoring by Third-Party Laboratories

由第三方化驗所定期檢測出水樣本

To ensure the independence and impartiality of effluent monitoring results, all project companies of the Group had appointed third-party laboratories to regularly test effluent samples.

為確保所有污水處理項目的出水監測結果均透過獨立與公正的檢測程序得出，本集團旗下每個項目均聘請第三方化驗所定期檢測出水樣本。

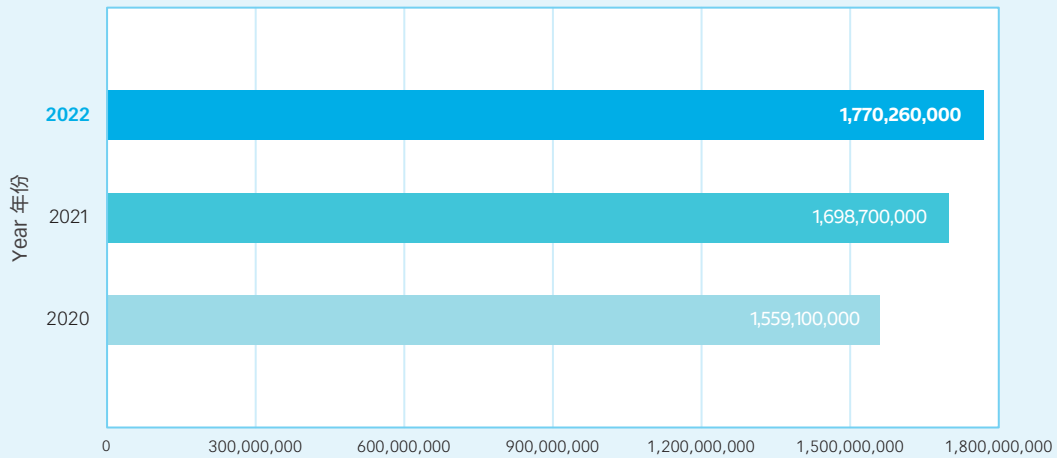
In 2022, the Group treated an aggregate of approximately **1,770,260,000 m³** waste water and reduced an aggregate of approximately **433,453 tonnes** COD. The Group's reusable water projects produced an aggregate of approximately **43,629,000 m³** reusable water

二零二二年，本集團共處理約**1,770,260,000**立方米污水，同時減少了約**433,453**噸的化學需氧量排放。本集團的中水回用項目共生產了約**43,629,000**立方米的回用水。

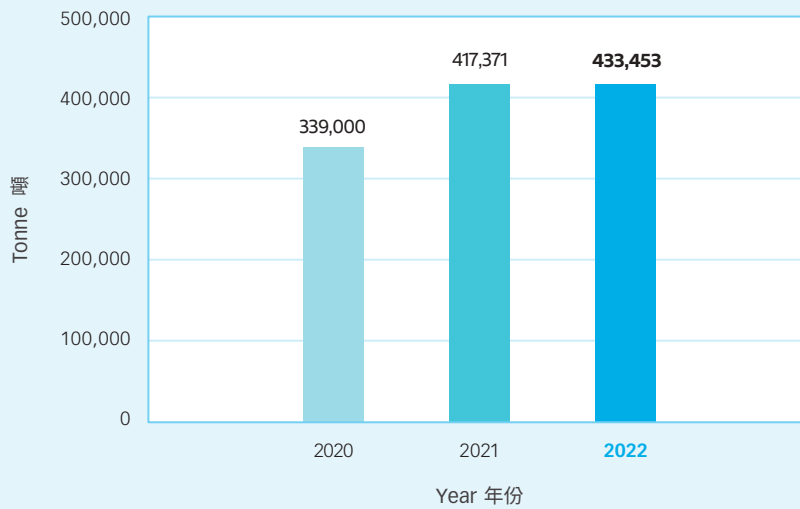
Environmental Responsibility

環境責任

Waste Water Treated in the Past Three Years (Unit: m³)
過往三年的污水處理量 (單位：立方米)



COD Reduction in the Past Three Years
過往三年的化學需氧量減排量



Environmental Responsibility 環境責任

Odour Control

The Group engages third-party laboratories to regularly test air emissions to ensure that its waste water treatment projects strictly comply with *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002), *Emission Standards for Odor Pollutants* (GB14554-93) or equivalent standards. Substances tested include, ammonia (NH₃), hydrogen sulphide (H₂S), ozone (O₃), methane (CH₄), etc. The Group utilises new biological deodourisation technologies, which are able to adjust the processing parameters in response to different types of odourous gases. These measures can reduce the amount of unpleasant odours emitted by waste water treatment plants, making the plants more environmental and “community-friendly”.

Sludge Treatment

Sludge is a semi-solid precipitation by-product produced from waste water treatment process and it is mainly produced during the process of sedimentation and biological treatment. While sludge contains bacteria, pathogenic sources, organic and inorganic pollutants, etc. At the same time, the organic matter in the sludge contains a large amount of recyclable energy resources.

In accordance with the “14th Five-Year Plan” for Urban Waste Water Treatment and Resources Utilisation Development, the Group actively implements pollution control with unwavering determination and adherence to standards. The Group has fully implemented the harmless sludge disposal and accelerated reducing the scale of sludge landfills. The Group actively promotes the utilisation of sludge resources and has been strictly adhering to the various national standards such as *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002) to actively evaluate its environmental and social performance.

氣味控制

本集團聘請第三方化驗所定期檢測旗下項目的大氣污染物排放指標，涵蓋氨、硫化氫、臭氧濃度及甲烷等，以確保污水處理項目嚴格遵守《城鎮污水處理廠污染物排放標準》(GB18918-2002)、《惡臭污染物排放標準》(GB14554-93)或同等標準中的大氣污染物排放要求。本集團採用新型生物除臭系統，能根據不同類型的氣體進行調整處理，減少污水處理廠所釋放出的異味，使工廠更加高效環保，真正達到「鄰利」。

污泥處理

污泥是污水處理過程中的副產物，主要是經沉澱和生物處理後產生的半固態沉積物。污泥含有細菌、致病源、有機及無機污染物等，同時污泥中的有機物蘊含大量可回收的能源和資源。

按照《「十四五」城鎮污水處理及資源化利用發展規劃》，本集團以堅定不移的決心、堅守標準，積極開展治污工作。本集團已全面實施污泥無害化處置，加快壓減污泥填埋規模。本集團積極推進污泥資源化利用，亦嚴格執行《城鎮污水處理廠污染物排放標準》(GB18918-2002)等有關國家標準處理污水處理項目所產生的污泥。

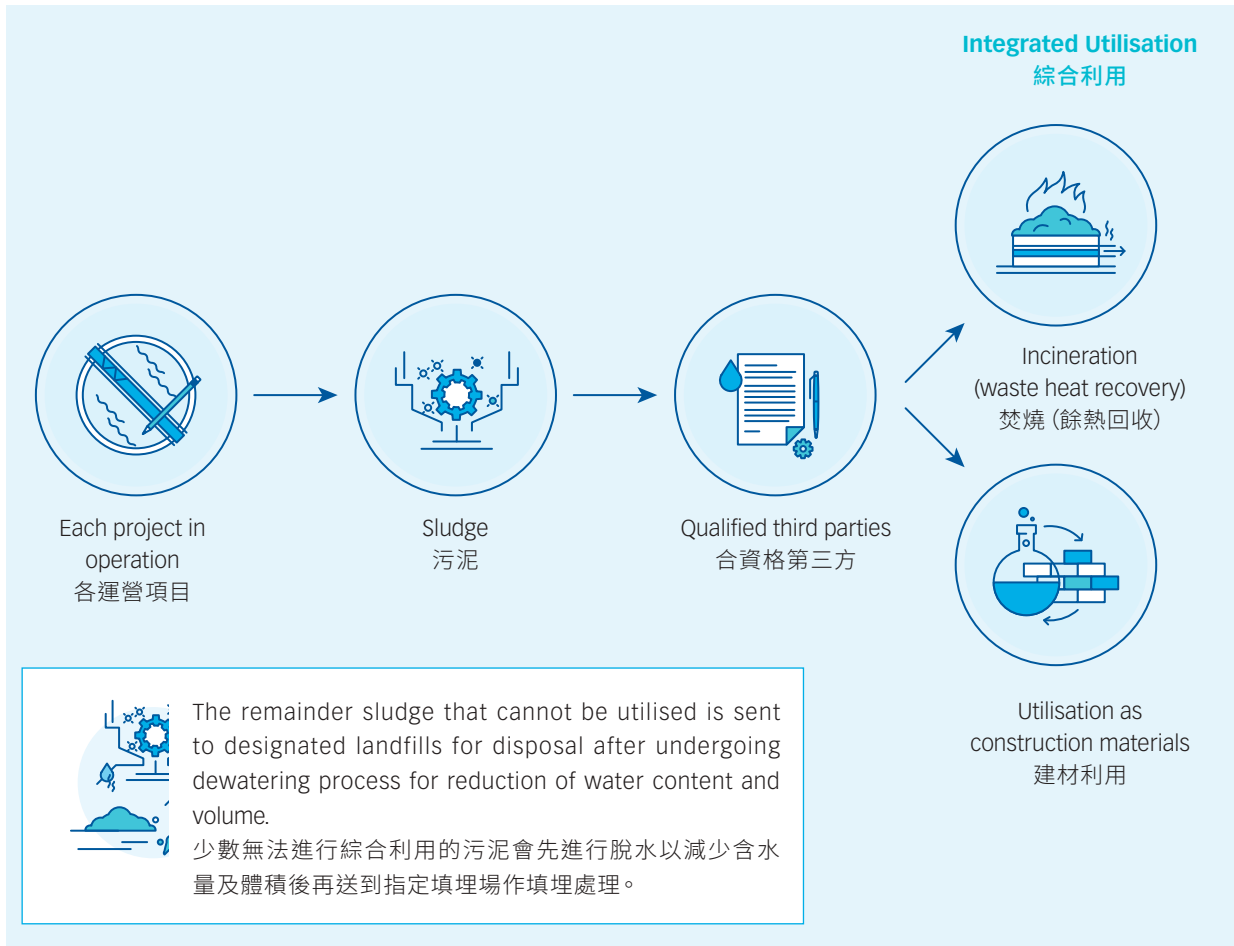
Environmental Responsibility 環境責任

Sludge Treatment Process

Most of the treated sludge with satisfactory testing results is sent to qualified third parties for further treatment, reuse and/or integrated utilisation, such as incineration (waste heat recovery), utilisation as construction materials, etc.

污泥處理流程

大部分經處理並通過檢測的污泥會被送到合資格第三方作進一步處理、循環再用及／或作綜合利用，如焚燒（餘熱回收）、建材利用等。

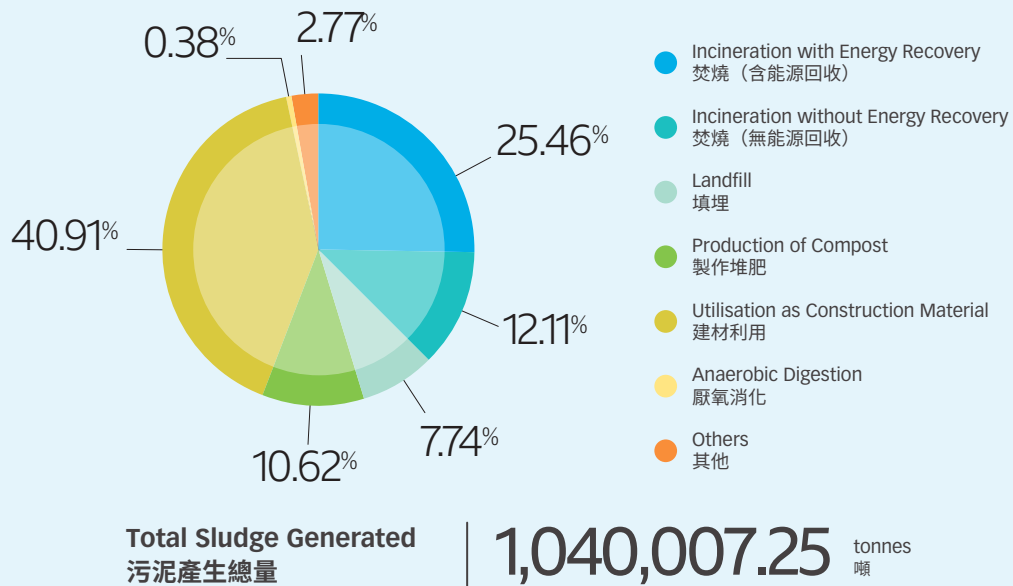


By adhering to the principle of “Development Driven by Technology and Innovation”, the Group continued boosting its investment and efforts in the field of technology R&D. As such, the Group achieved significant breakthrough in the low-temperature sludge drying technology. The technology effectively reduces sludge weight by 60%, and the high efficiency and stability of sludge treatment equipped the Group a leading position in the water sector. The Group will continue exploring low-cost and efficient sludge treatment and comprehensive utilisation technologies (such as protein and phosphorus recovery technologies), further promoting the water industry towards technological transformation and sustainable development.

本集團堅持「創新引領科技，科技引領發展」，持續加大在技術研發領域的投資及研究。因此，本集團在污泥低溫乾化技術上取得重大的突破，有效將污泥重量減少60%。高效穩定地處理污泥使本集團在水務行業處於領先地位，因此本集團將繼續探索更低成本、高效率的污泥處理和綜合利用技術（如蛋白質和磷回收技術），務求進一步推動水務行業的技術改革和可持續發展。

In 2022, the Group generated a total of approximately
1,040,007.25 tonnes of sludge.
二零二二年，本集團共產生了約**1,040,007.25**噸污泥。

**Sludge Generated from Waste Water Treatment Projects in 2022:
Ultimate Off-site Treatment/Disposal by Third Parties**
二零二二年污水處理項目所產生的污泥：經第三方最終場外處理/處置的方法



To promote sustainable waste management throughout the value chain, the Group engages qualified third parties for further treatment of the sludge produced by its project companies. To ensure environmental protection responsibilities of downstream businesses in the value chain, the Group also conducts regular audits to make sure that the sludge treatment and disposal processes comply with the national environmental protection laws and regulations. Majority of the sludge treatment techniques incorporate re-circulation measures to enhance energy recovery and material reuse, further promoting sustainable waste management.

為促進整個價值鏈的可持續廢物管理，本集團僱用合資格的第三方組織進一步處理項目公司所產生的污泥。為確保價值鏈下游企業的環保責任，本集團亦透過定期審核，以確保污泥處理及處置流程遵循國家環保法規。大部份的污泥處理技術更包含循環措施，以實現能源回收及物料再生利用，推動可持續廢棄物管理。

Environmental Responsibility

環境責任

Waste Management

Waste recycling is an effective way of resource utilisation of waste. The Group extensively recycles and reuses wastes including paper, metal, plastics, and food waste in its operating facilities, offices and dormitories, etc. The Group also actively encourages employees to reduce waste at source and cultivate the habits of waste separation and recycling, thereby putting green concepts in to practice. At the same time, the Group regularly monitors, verifies and records relevant data of various types of recycled waste in the monthly production or environmental protection reports. All general wastes are handled by qualified external waste collectors and recyclers to ensure proper waste disposal and compliant reuse.

廢物管理

廢物回收利用是廢物資源化利用的有效途徑。本集團在其運營設施至辦公室和宿舍等地均進行廢棄物回收以及重用，回收的廢棄物包括紙張、金屬、塑料和廚餘等。本集團積極鼓勵員工源頭減廢，培養垃圾分類、回收利用的生活習慣，將綠色理念付諸實踐。同時，本集團在月度生產或環保報告中定期監測、核實並記錄各類回收廢棄物的相關數據。所有一般廢物均由合資格的外部廢物收集商和回收商處理，以確保廢棄物的妥善處理及合規二次利用。

Office Waste Recycling Statistics in 2022 (Unit: kg)

二零二二年辦公室廢棄物回收量統計(單位：公斤)



In 2022, the Group recycled a total of **48,189.70 kg** office waste.

二零二二年，本集團的辦公室廢棄物回收總量為**48,189.70公斤**。

Environmental Responsibility 環境責任

Energy and Material Usage

In pursuing the “Dual Carbons” goals, the transformation of the water management industry to low-carbon or even carbon negative has become a top priority. Everbright Water continues to explore energy-saving and emission-reduction measures in all aspects of its business operations and reduces unnecessary resource consumption during operation and construction. For example, energy-saving competitions are organised at the project company level, and advanced energy-saving equipment, such as light guide beams and new sodium lamps, is adopted.

Another important route to improve resource efficiency is to recycle energy from waste water. The Group utilises methane produced from sludge digestion to generate electricity for in-plant use, thereby reducing reliance on non-renewable energy. In addition, the Group’s waste water source heat pump project, which is a green demonetisation project with high merits, extracts thermal energy from the organic materials in waste water to provide heat service for the surrounding buildings in winter.

To implement a long-term sustainable strategy for resource management, each of the Group’s project companies keeps detailed monthly records of its energy and key materials usage. These records are compiled and submitted to the regional management centres for compilation. Accordingly, the Group can make adjustments by analysing sectoral resource usage and better utilise available energy and materials. At the same time, the introduction of the “Intelligence Water” digital system has enabled a more refined and dynamic management of the entire production management and service processes of the water system through the use of big data analysis a more comprehensive assessment of asset life cycle and provides effective support for cost optimisation and decision-making on energy resources.

能源及物料使用

在實現「雙碳」目標的過程中，水治理行業向低碳乃至負碳方向轉型成為當務之急。光大水務在業務運營的各個環節不斷探索節能減排措施，減少運營和建設過程中不必要的資源消耗，包括舉辦項目公司層面的節能競賽，在處理廠採用導光束、新鈉燈等節能設備。

此外，回收利用污水中的能源亦是本集團重要的資源利用，如利用污泥消化過程中產生的甲烷進行發電供廠內使用，以減少使用非再生能源。另外，本集團的污水源熱泵項目透過提取蘊藏於污水有機物內的熱能，為周邊建築提供冬季供暖服務，是環保節能示範工程。

為配合制定長遠及可持續的資源管理策略，本集團的各項公司每月都詳細記錄能源和主要物料的使用情況，並提交至區域管理中心進行整合。透過分析各層面的資源利用情況，本集團能對能源和物料使用做出相應的調整。同時，「智慧水務」數字化系統的應用，通過大數據分析，可以更加精細和動態的方式來管理水務系統的全線生產、管理和服務流程，有助於更全面地評估資產生命週期，並為能源資源成本優化和決策提供有效支持。

Environmental Responsibility 環境責任

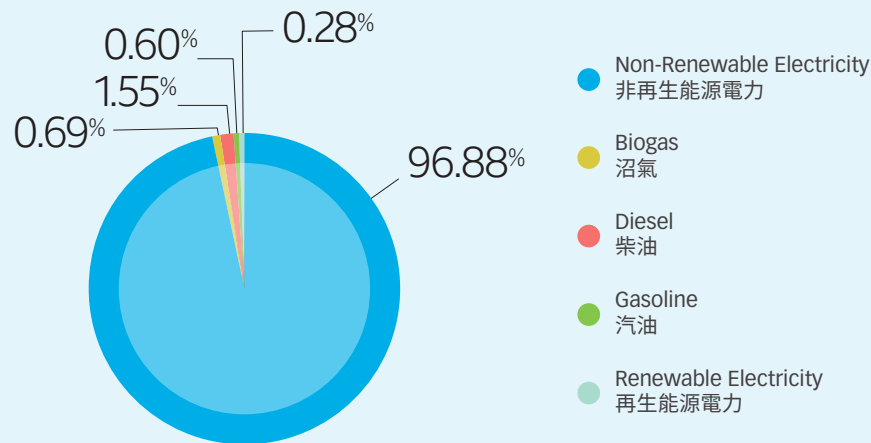
In addition, the Group promotes a green low-carbon working environment and encourages employees to adopt energy-saving measures, such as switching computers to energy-saving mode, turning off computers, printers and other electrical appliances after working hours, as well as unplugging all electrical devices when leaving offices for long holidays.

本集團更提倡綠色低碳工作模式，鼓勵員工採用節能措施，包括將電腦調至節能模式，於工作日結束時關掉電腦、打印機及其他電器，並於長假前離開辦公室時拔掉電器的電源。

In 2022, the Group consumed energy in total of **2,624,579.23 GJ**.

二零二二年，本集團共耗用**2,624,579.23吉焦**能源。

Energy Consumption Statistics of Projects
Under Construction and in Operation in 2022
二零二二年各在建及運營項目的能源消耗統計



Note:

Energy consumption is calculated based on the reference coefficients given by *China Energy Statistical Yearbook 2021*.

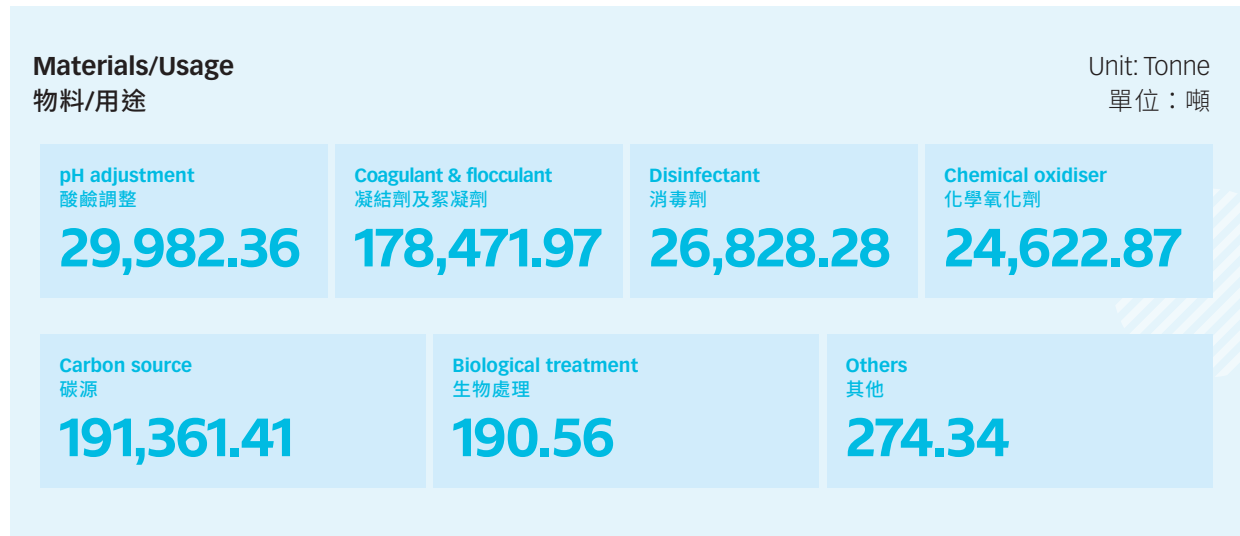
附註：

能源消耗量是根據《中國能源統計年鑒2021》的參考系數所計算。

Environmental Responsibility 環境責任

Key Materials Consumption Statistics of Operating Projects in 2022

二零二二年各運營項目的主要物料使用統計



Note:

Including the key materials consumption from municipal waste water treatment projects, industrial waste water treatment projects, reusable water projects and leachate treatment projects.

附註：

主要物料使用統計包括生活污水處理、工業廢水處理、中水回用與滲濾液處理項目。

Water Use

As a leading water treatment enterprise in the PRC, the Group implements the ideology of water conservation in the utilisation, protection and allocation of water resources. The Group also strives to reduce freshwater consumption and explore opportunities of water re-circulation. As such, all these steps improve the utilisation of water resources and reduce the pressure on local water resources. The Group's freshwater is mainly sourced from its own re-circulation system, followed by municipal water supply utilities and groundwater source, which are generally used for conventional industrial use within the waste water treatment plants.

水資源使用

作為中國領先的水處理企業，本集團在水資源的利用、保護、配置方面貫徹節約用水的思想理念。本集團亦致力減少淡水消耗並探索循環用水的機會，提高水資源利用率，緩解地方水資源壓力。本集團使用的淡水主要源自循環水，其次為市政供水及地下水，一般用作污水處理廠內工業用途。

Environmental Responsibility

環境責任

In addition, the Group's highly efficient waste water treatment projects produce reclaimed water which can be used for purposes such as street cleaning, vehicle washing, landscaping, toilet flushing, firefighting, etc

此外，本集團高效的污水處理項目亦產生再用水以作其他用途，如街道清潔、車輛清洗、園林美化、廁所沖洗和救火等。

Re-Circulating Water

循環水

Water is re-circulated within the waste water treatment system as much as possible to reduce the use of freshwater

為了減少對淡水的需求，將水盡可能在污水處理系統內循環使用。

Reclaimed Water

再用水

Reclaimed water refers to the effectively treated effluent water which is clear and safe for general industrial use or non-drinking purposes such as street cleaning, vehicle washing, landscaping, toilet flushing, firefighting, etc.

再用水是指經過高效污水處理的排放水，水質清澈並可安全用作多項非飲用用途，包括清洗街道及車輛、園藝灌溉、沖廁和救火等。

30,512,195 ^{m³}
立方米

In order to further improve water conservation and management, the Group continues exploring and enhancing its projects' water use efficiency through a larger scale of re-circulating and reclaiming water as well as via other water conservation measures.

本集團將持續提高循環水及再用水的使用比例，並實施多種節約用水舉措，進一步探索提高項目用水效益的可能性，為水資源保護和治理貢獻一份力量。

The Group's reusable water projects purify effluent from waste water treatment plants in accordance with the *Reuse of Urban Recycling Water – Water Quality Standard for Industrial Uses* (GB/T19923-2005) or equivalent standards. To reduce freshwater consumption in cities, reusable water produced by reusable water projects can be used as in-plant cooling water or for general industrial use by other corporations. The Group's *Operations Manual* sets out the standards for reusable water produced from the reusable water projects. Employees are required to continuously monitor the quality of the reusable water to ensure the health and safety of the customers, in addition to complying with the relevant standards.

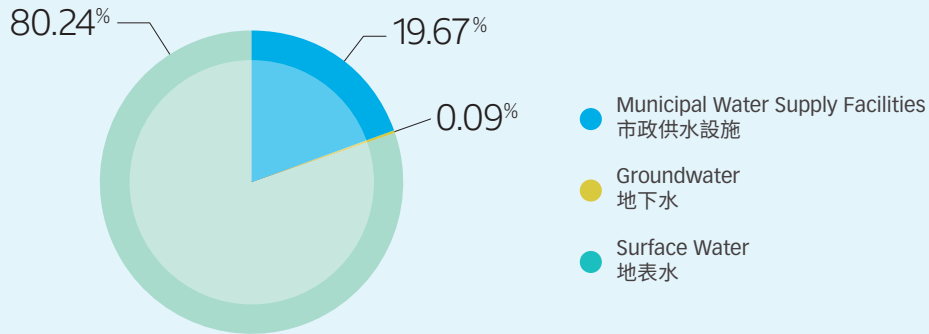
本集團將污水處理廠處理後的出水供給中水回用項目，將其按照《城市污水再生利用工業用水水質》(GB/T19923-2005)或同等標準淨化成回用水，用作廠區冷卻水或供其他企業作一般工業用途，從而減少城市的淡水消耗。本集團的《運營手冊》列明中水回用項目所產生的回用水須符合的標準，員工須持續監控回用水的水質，確保符合相關國家標準，保障客戶的健康及安全。

In 2022, the Group's reusable water projects produced approximately **43,629,000** m³ reusable water

二零二二年，本集團的中水回用項目共生產了約**43,629,000**立方米的回用水。

Environmental Responsibility
環境責任

Freshwater Withdrawal Statistics of Projects Under Construction and in Operation in 2022
二零二二年各在建及運營項目的淡水取水統計



Total Freshwater Withdrawn
總淡水取水量
134,598,357 m³
立方米

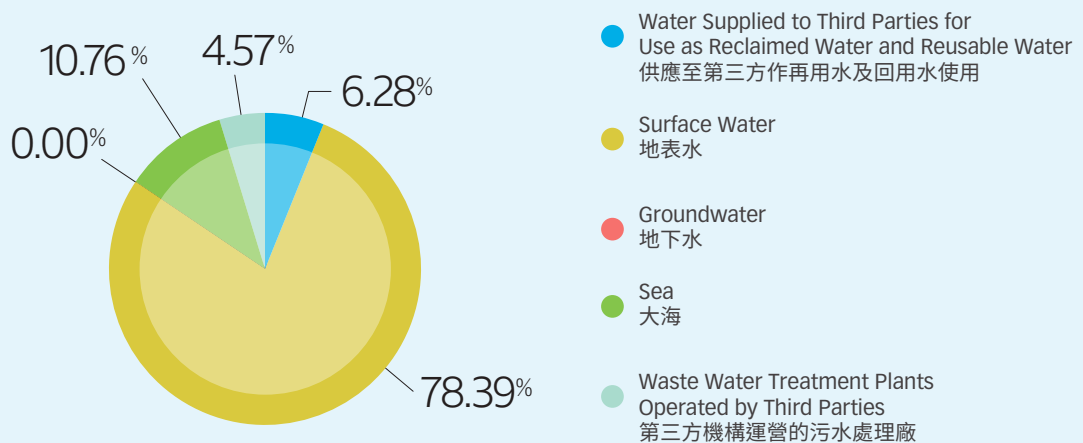
Note:

1. During the Reporting Period, the Group did not directly withdraw any water from sea.

附註：

1. 本集團於報告期內沒有直接取用海水。

Water Discharge Statistics of Projects Under Construction and in Operation in 2022
二零二二年各在建及運營項目的排放水統計



Total Water Discharged
總排放水量

1,814,983,222 m³
立方米

Environmental Responsibility 環境責任

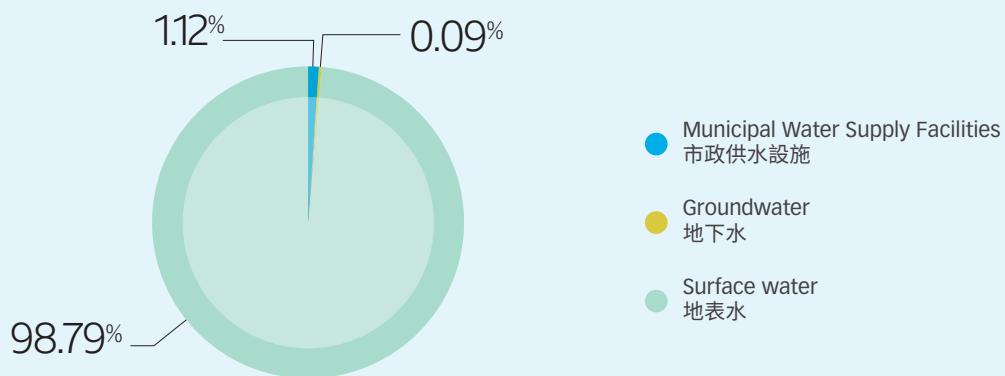
Apart from supplying to third parties as reclaimed and/or reusable water, the Group's effluents are mainly discharged as surface water, to the sea, and to waste water treatment plants operated by third parties. All discharges water strictly complies with applicable discharge standards to ensure minimal adverse impacts on downstream users of water bodies (including agricultural, public recreation or potable uses, etc.). The different types and conditions of receiving bodies will be taken into consideration when assessing the environmental impact for individual projects.

Referring to the Aqueduct 3.0 published by the World Resources Institute ("WRI") in 2019, during the Reporting Period, the Group assessed the water stress of its projects and formulated action plans for its project companies under high water stress, such as regular inspections of pipes to avoid wasting water resources due to leaky or broken pipes. WRI assesses the water stress of an area with the ratio of total water withdrawals to available renewable surface and groundwater supplies. Higher values indicate more competition among users.

除了供應至第三方作再用水及／或回用水使用外，本集團的排放水主要排放至第三方機構運營的污水處理廠、大海及地表。所有排放均嚴格遵循排水標準以確保水體的下游使用者（包括農業灌溉、公眾休憩或飲用等）皆不會受到負面影響。本集團亦根據接收各項出水的水體類別和狀況，在進行環境影響評估時作相應考量。

於回顧期內，本集團參照世界資源研究所在二零一九年發佈的Aqueduct 3.0，評估本集團各項目的水資源壓力，並為存在高水資源壓力的項目公司制定應對計劃，例如定期檢查喉管，避免因喉管滲漏或損毀而浪費水資源。世界資源研究所根據地區的總取水量與可用及可再生地表水供應量的比率判斷該地區的水資源壓力，水資源壓力越高，代表用戶之間的競爭越大。

Freshwater Withdrawal Statistics of Projects Under Construction and in Operation in Areas with Water Stress in 2022
二零二二年各在建及運營項目於具水資源壓力的地區的淡水取水統計



Environmental Responsibility 環境責任

Biodiversity Risk

At the 27th conference of the *United Nations Framework Convention on Climate Change (COP27)*, nature protection and biodiversity preservation were the two important themes. Both issues have been actively promoted via the special "Biodiversity Theme Day" to emphasise the protection, restoration and sustainable use of ecosystems, including land, freshwater, coastal and ocean, etc. This is essential as they serve as nature-based solutions to support mitigation, adaption and reduction of negative impacts in light of climate change. These discussions reflect the international awareness that ecosystem protection is boundaryless and nationless-collaborative and unified efforts are required to address the challenges of climate change and biodiversity loss. As the present land use is extremely unfavourable to endangered species, cooperation of communities and different sectors are highly needed.

In response to climate change, China has vigorously promoted ecological civilisation and taken up international leadership on nature conservation. High-level representatives from China have attended the COP27 Biodiversity Theme Day and affirmed the efforts shown in the *Post-2020 Global Biodiversity Framework*. In 2021, China had also actively participated in the 15th meeting of the Conference of the Parties to the *Convention on Biological Diversity (CBD COP 15)* and the Information Office of the State Council of China had published the white paper *Conservation of Biodiversity in China*. These reflects the national commitment and engagement to realising ecological civilisation which the Group looks forward to contributing its efforts.

Everbright Water highly values biodiversity and its protection and risks. Therefore, the Group actively practises ecological environment conservation throughout the projects planning and operation stages. Prior to executing new projects, the Group evaluates possible impacts on the local ecological environment and biodiversity such that highly ecologically sensitive areas are avoided as much as possible. The Group's raw water protection and river-basin ecological restoration projects are also equipped with ecological buffer areas to minimise the impact on the local ecological environment.

Note:

¹ *Post-2020 Global Biodiversity Framework* is an important expected outcome of the second phase of Conference of the Parties to the Convention on Biological Diversity (CBD COP 15).

生物多樣性風險

在二零二二年舉行的《聯合國氣候變化框架公約》第二十七次締約方大會 (COP27) 中，關於自然保護和生物多樣性的議題備受關注。COP27特設「生物多樣性主題日」，旨在推動保護、恢復和可持續利用生態系統，包括陸地、淡水、沿海和海洋等，以減少氣候變化的影響，並通過基於自然的解決方案減緩和適應氣候變化。這些舉措都充分反映出國際社會意識到地球生態系統是一個不可分割的整體，同時應對氣候變化及生物多樣性喪失的挑戰需要社會各方攜手合作。人類使用土地的方式、瀕危物種的分佈地區等，都是對生物多樣性構成威脅的主要因素。

在推動生態文明的工作上，中國一直不遺餘力地發揮領導力和協調作用。中國高級別代表出席了COP27生物多樣性主題日，並就《2020年後全球生物多樣性框架》¹的達成和實施做出展望。於二零二一年，中國積極參與《生物多樣性公約》締約方大會第十五次會議(CBD COP 15)，中國國務院新聞辦公室發表了《中國的生物多樣性保護》白皮書，體現了國家對生態文明的重視及貢獻，本集團亦期待為之貢獻力量。

光大水務非常關注生態環境保護及生物多樣性風險。本集團從規劃到運營階段都積極實踐生態環境保育，在建設新項目前充分評估當地生態環境及生物多樣性，盡量避免在自然棲息地及高度生態敏感地區附近興建項目設施；本集團的原水保護項目及流域治理項目均設有生態緩衝區，以減低項目對當地生態環境的影響。

附註：

¹ 《2020年後全球生物多樣性框架》是《生物多樣性公約》締約方大會第十五次會議(CBD COP 15)第二階段會議的重要預期成果。

Environmental Responsibility

環境責任

The Group uses the Integrated Biodiversity Assessment Tool (“**IBAT**”) to assess the impact of its economic activities on biodiversity. In order to effectively invest and formulate operational strategies, we use contextual analysis based on the International Union for Conservation of Nature’s *Red List of Threatened Species*, the World Database of Protected Areas and the Biodiversity Critical Areas Database to minimise the loss of biodiversity.

Findings of IBAT Assessment IBAT 評估調查結果

Protected areas are areas recognised and managed through legal or other effective means to achieve the long-term conservation of nature with associated ecosystem services and cultural values. Based on the Group’s analysis, 73.4% of the Group’s projects are not located in or adjacent to any protected area. 16.1% and 10.5% of the Group’s projects are recognised to be located within 50 km to 1 to 2 protected areas, respectively.

Number of Protected Areas within 50 km of Projects, by % of Number of Projects

Number of Protected Areas within 50 km of Projects

項目50公里範圍內的保護區數目

0
1
2

本集團使用綜合生物多樣性評估工具（「**IBAT**」），按照國際自然保護聯盟《瀕危物種紅色名錄》、世界保護區資料庫及生物多樣性關鍵區域資料庫，以評估本集團的經濟活動對生物多樣性的影響，從而制定有效的投資及運營策略，遏止喪失生物多樣性。

IBAT評估調查結果

保護區是通過法律或其他有效手段劃分和管理的地區，用於長期保護具有相關生態系統服務和文化價值。根據本集團的分析，73.4%本集團旗下的項目並不位於或鄰近保護區。16.1%及10.5%項目的50公里範圍內有一至二個保護區。

項目50公里範圍內的保護區數目，按項目數目百分比

% of Number of Projects

項目數目百分比

73.4%
16.1%
10.5%

100.0%

Environmental Responsibility 環境責任

Key biodiversity areas are sites contributing significantly to the global persistence of biodiversity, in terrestrial, freshwater and marine ecosystems. 48.3% of the Group's projects are not located in or adjacent to any key biodiversity area. 19.6% and 22.4% of the Group's projects are recognised to be located within 50 km to 1 and 2 key biodiversity areas, respectively. Only 9.8% of the Group's projects are located in proximity to 3 or more key biodiversity areas.

生物多樣性關鍵區是對維持全球生物多樣性具有重要意義的地區，當中包括陸地、淡水及海洋生態系統。48.3%本集團旗下的項目並不位於或鄰近任何生物多樣性關鍵區。19.6%及22.4%項目的50公里範圍內有一至兩個生物多樣性關鍵區域。本集團的項目當中只有9.8%鄰近於3個或以上的生物多樣性關鍵區域。

Number of Key Biodiversity Areas within 50 km of Projects, by % of Number of Projects

項目50公里範圍內的生物多樣性關鍵區數目，按項目數目百分比

Number of Key Biodiversity Areas within 50 km of Projects 項目50公里範圍內的生物多樣性關鍵區域數目

% of Number of Projects 項目數目百分比

0	48.3%
1	19.6%
2	22.4%
3	6.3%
4	2.1%
5	1.4%

100.0%

The Group's projects strictly comply with national and international environmental standards to ensure the projects causing the least amount of impacts on near-by ecosystems and wildlife. During the Reporting Period, no significant impact on biodiversity and species on International Union for Conservation of Nature's *Red List of Threatened Species* from the Group was observed. The Group will continue to monitor and report if any of its projects undermine biodiversity.

本集團的項目嚴格遵循國家及國際環境標準，以確保項目不會對鄰近的生態系統及野生生物造成負面影響。報告期間，本集團並沒有發現對國際自然保護聯盟《瀕危物種紅色名錄》所列物種造成顯著影響。本集團將繼續監察和報告其項目對生物多樣性的潛在影響。



**WE CARE FOR
OUR EMPLOYEES**
AND GROW TOGETHER

關懷員工，共同成長

Talent Development 人才發展

The Group firmly believes that an excellent and stable talent team is the key to its business. The Group has always adhered to the "People-Oriented" philosophy and strives to build a sound talent management system and talent training mechanism. The Group continuously formulates its human resources strategies based on the needs arising from its long-term business development goals. Additionally, the Group strategically trains business talents, develops and improves the talent management system, and provides employees with attractive career development opportunities. Meanwhile, the Group makes efforts in creating a fair, diverse, caring and inclusive working environment.

本集團將優秀、穩健的人才隊伍視作為企業長青的基石，一直以來堅持「以人為本」的理念，著力構建人才管理體系和完善的人才培養機制，不斷透過制定符合企業長遠發展目標需求的人力資源策略培養業務英才，著力建構和完善人才管理體系，為員工提供具吸引力的職業發展機會及打造公平、多元、關愛、包容的工作環境。

Employment Profile

員工概覽

As at 31 December 2022, Everbright Water had a total of **2,300** employees. ⁽¹⁾
截至二零二二年十二月三十一日，光大水務共有**2,300**名員工。⁽¹⁾

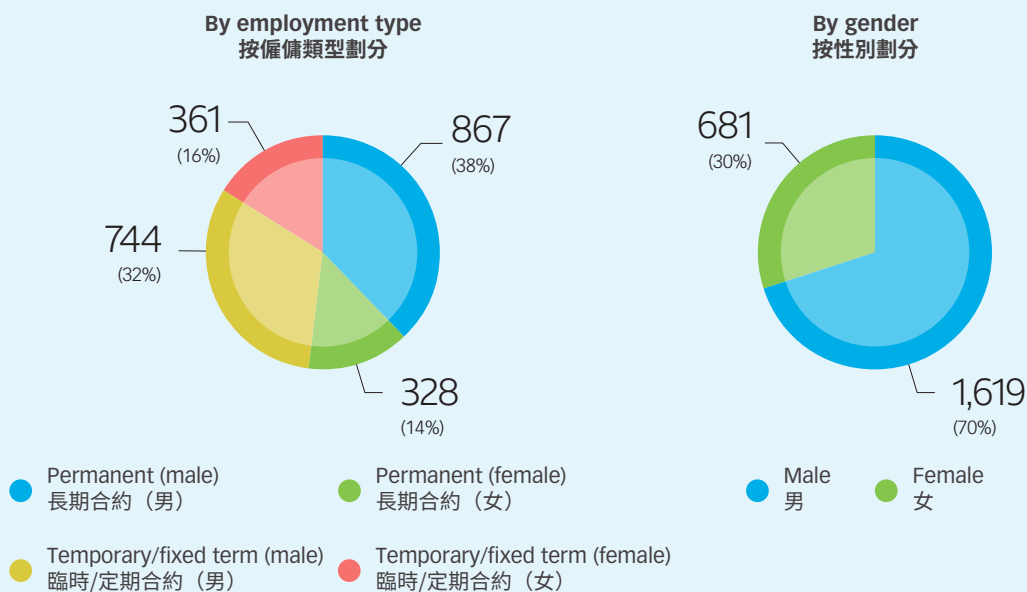
Note:

附註：

⁽¹⁾ All the employees were full-time employees.

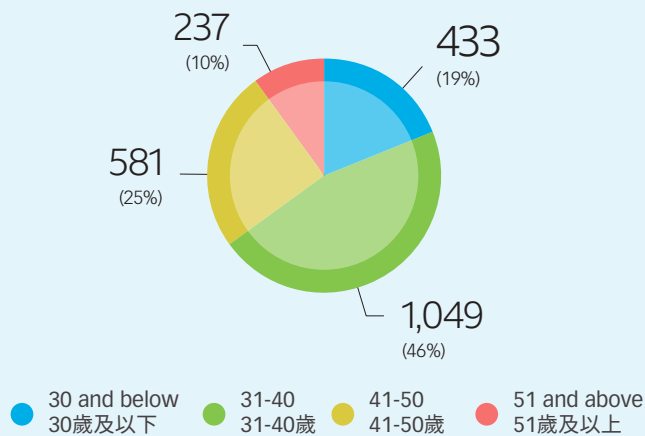
⁽¹⁾ 所有員工均為全職員工。

Statistics on Diversity of Employees in 2022 二零二二年員工多元化統計

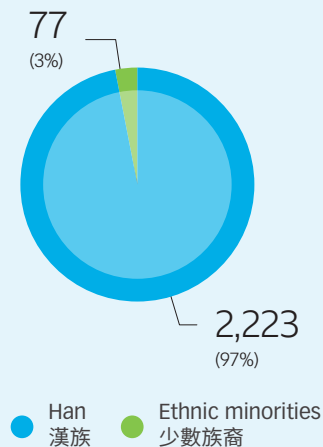


Talent Development 人才發展

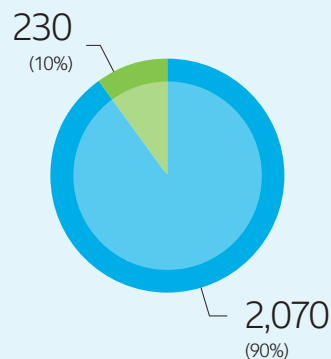
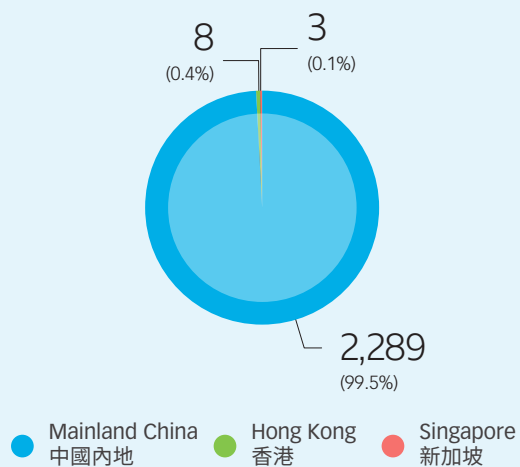
By age
按年齡劃分



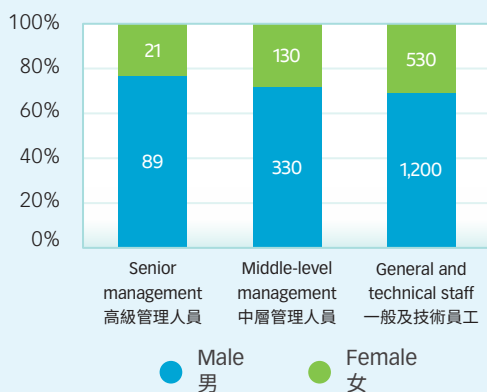
By ethnicity
按民族劃分



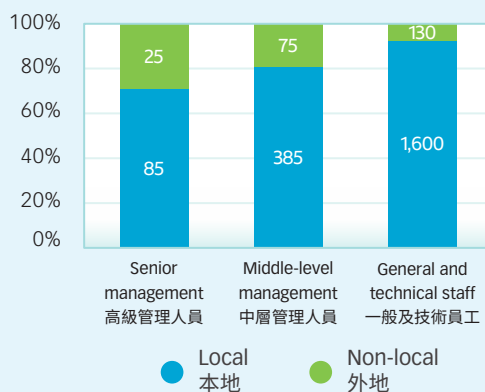
By geographical region
按地區劃分



Male to female ratio by employee ranking
各員工職級的男女比例



Employees hired by geographical region
按地區劃分的受僱員工



Talent Development 人才發展

Notes:

- (1) For mainland China, employees hired from the same Province are regarded as local employees, whereas the employees hired from other Provinces are regarded as non-local employees.
- (2) As at 31 December 2022.

Talent Recruitment and Management

High-quality talent recruitment is the foundation for “Innovation-Driven Development” of business. Therefore, Everbright Water collaborates with various talent recruitment agencies and higher education institutions to recruit professionals in various fields through different channels, including local, overseas, and campus recruitments. In addition, the Group actively brings in international, national and local talents from multiple levels and channels, and recruits domestic and foreign technical and management professionals by hiring well-known experts as technical consultants and merging with technology companies. At the same time, in order to promote the development of the local economy and employment in remote areas, the Group pays close attention to the employment in project development areas.

The Group has formulated various employment measures, including competitive remuneration packages, comprehensive employee benefits and development opportunities, in order to retain talents. The Group also regularly reviews and adjusts remuneration packages based on labour market trends. During the Reporting Period, the Group has conducted a review and adjustment (if appropriate) of remuneration for all employees.

In addition to constantly considering, formulating and adjusting human resources policies, the Group is committed to enhancing the sense of accomplishment and sense of belonging of its employees by providing them with comprehensive protection. Therefore, Everbright Water summarises the number of employees who are about to meet the retirement requirements every year, and at the same time provides employees with a career management plan including retirement arrangements. Moreover, the Group provides mandatory pension insurance in accordance with the laws and regulations of the countries or regions where employees are employed, and has also established a supplementary pension system as an additional retirement benefit for employees to achieve the aim of caring for employees.

附註：

- (1) 在中國內地同省份受聘的員工被視為本地員工，而在中國內地外省份受聘的員工則被視為外地員工。
- (2) 截至二零二二年十二月三十一日。

吸引及管理人才

引才納賢是推動業務創新發展的基礎。因此，光大水務透過與各類人才招聘機構及高等院校合作，通過不同方式招攬各領域專才，包括本地招聘、海外招聘、校園招聘等途徑。此外，本集團更積極從多層次、多渠道引進國際、國家及地方人才，透過聘請知名專家擔任技術顧問、併購技術公司等方式引進國內外的技術和管理專才。同時，為了推動偏遠地區的項目經濟和就業發展，本集團密切關注項目發展地區的人才就業與聘用情況。

本集團制定了多項僱傭措施，包括提供具有競爭力的薪酬待遇、良好的非薪酬福利待遇及發展機會，致力挽留人才。本集團亦按照勞工市場趨勢，定期檢討及調整薪酬待遇。於報告期內，本集團已經為所有員工檢討及調整薪酬待遇（如適當）。

除了不斷考慮、制定及調整人力資源政策，本集團致力於提升員工的工作成就感和歸屬感，努力為員工提供全方位保障。因此，光大水務每年均會統計即將符合退休條件的員工人數，同時為員工妥善提供包括退休安排在內的職業生涯管理計劃。另外，本集團按照僱員受聘的國家或地區的法律規定提供強制性養老保險，更建立了補充養老制度，作為員工額外的退休福利，務求達到關愛員工的目的。

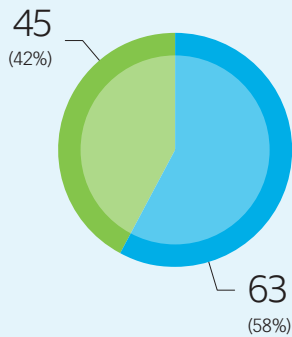
In 2022, there were **108** new employees, accounting for **4.70%** of the Group's total workforce, while staff turnover (including resignation and retirement) was **182**, accounting for **7.91%** of the Group's total workforce.

二零二二年，本集團新聘員工**108**名，佔員工總數的**4.70%**，員工流失數目（包括離職或退休）為**182**名，佔員工總數的**7.91%**。

Talent Development 人才發展

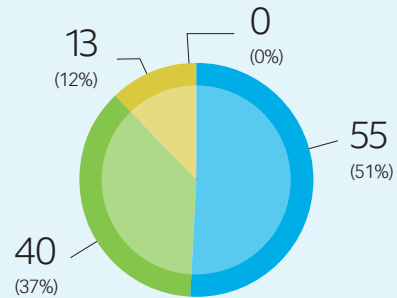
New Employees Statistics in 2022 二零二二年新聘員工數據統計

By gender
按性別劃分



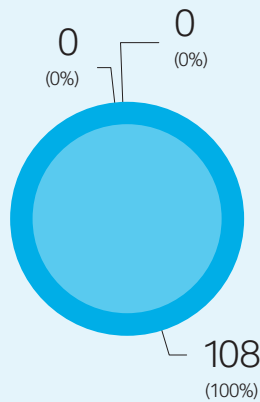
● Male 男 ● Female 女

By age
按年齡劃分

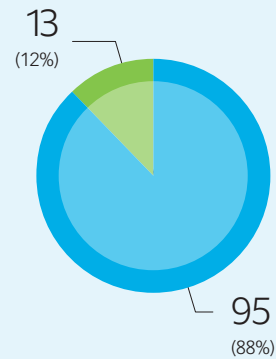


● 30 and below 30歲及以下 ● 31-40 31-40歲 ● 41-50 41-50歲 ● 51 and above 51歲及以上

By geographical region
按地區劃分



● Mainland China 中國內地 ● Hong Kong 香港 ● Singapore 新加坡



● Local 本地 ● Non-local 非本地

Note:

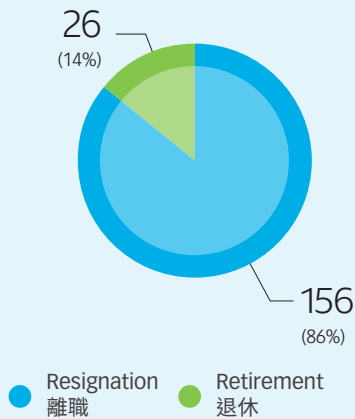
For mainland China, employees hired from the same Province are regarded as local employees, whereas the employees hired from other Provinces are regarded as non-local employees.

附註：

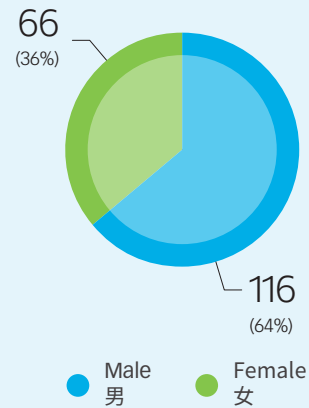
在中國內地同省份受聘的員工被視為本地員工，而在中國內地外省份受聘的員工則被視為外地員工。

Employee Turnover (Resignation/Retirement) Statistics in 2022 二零二二年員工流失(離職/退休)數據統計

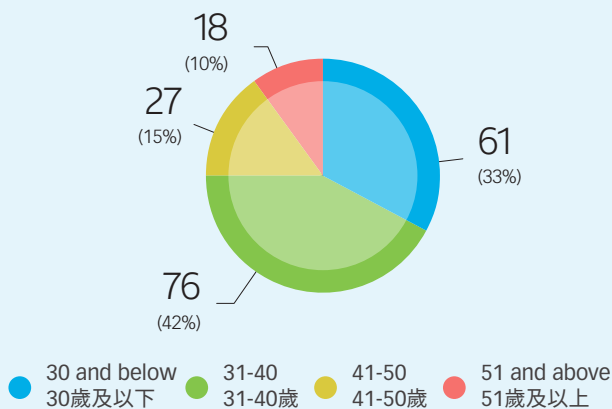
By classification
按類別劃分



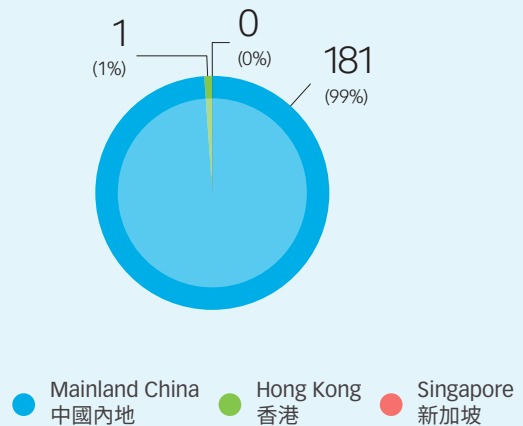
By gender
按性別劃分



By age
按年齡劃分



By geographical region
按地區劃分



Percentage of Employees Eligible for Retirement in Five and Ten years

未來五年及十年內合資格退休的員工百分比

Employee ranking
員工職級

Senior management
高級管理人員

in five years
五年內

14.5%

in ten years
十年內

37.3%

Middle-level management
中層管理人員

15.4%

16.1%

General and technical staff
一般及技術員工

14.9%

16.0%

Talent Development 人才發展

Talent Development



Everbright Water attaches great importance to the career planning of employees, and is committed to providing substantial and valuable development opportunities for employees, so that they can fully unleash their potential at work and achieve good development in both personal growth and career. Based on the "People-Oriented" philosophy, the Group has formulated the *Human Resource Management and Capacity Building Policy* and a systematic talent development framework. The Group provides special skills training for employees of different types and levels. In addition, the Group continues to improve the organisational human resource management system, develops and strengthens the development of internal training talent teams and the cultivation of backup talents, and is committed to providing employees with multiple career development plans and abundant learning opportunities throughout career planning, helping employees discover their potential and establish core competencies.

人才發展



光大水務重視員工的職業生涯規劃，並致力為員工提供充實及具價值的發展機會，讓他們能夠在工作上盡展所長，在個人成長和職業生涯上均能獲得良好發展。本集團基於「以人為本」的理念，制定了《人力資源管理培訓政策》及系統性人才發展框架，本集團為不同類型和層級的員工提供專項技能培訓。此外，本集團持續完善組織人力資源管理制度，建設並強化內部培訓人才隊伍建設及後備人才培養，致力於為員工提供多元事業發展計劃以及貫穿職業生涯規劃的豐富進修機會，幫助員工發掘潛力、打造核心能力。

In 2022, the Group provided on-the-job training for all the employees. The total training hours were **139,296** hours, while the average training hours per employee were **60.56** hours.

二零二二年，本集團為每位員工均提供在職培訓。培訓總時數為**139,296**小時，員工人均培訓時數為**60.56**小時。

Statistics on employee training and development in 2022

二零二二年員工培訓與發展數據統計

Average training hours per person by gender 按性別劃分的人均培訓時數



Female
女

62.71



Male
男

59.66

Average training hours per person by employee ranking 按員工職級劃分的人均培訓時數

Senior management
高級管理人員

39.87

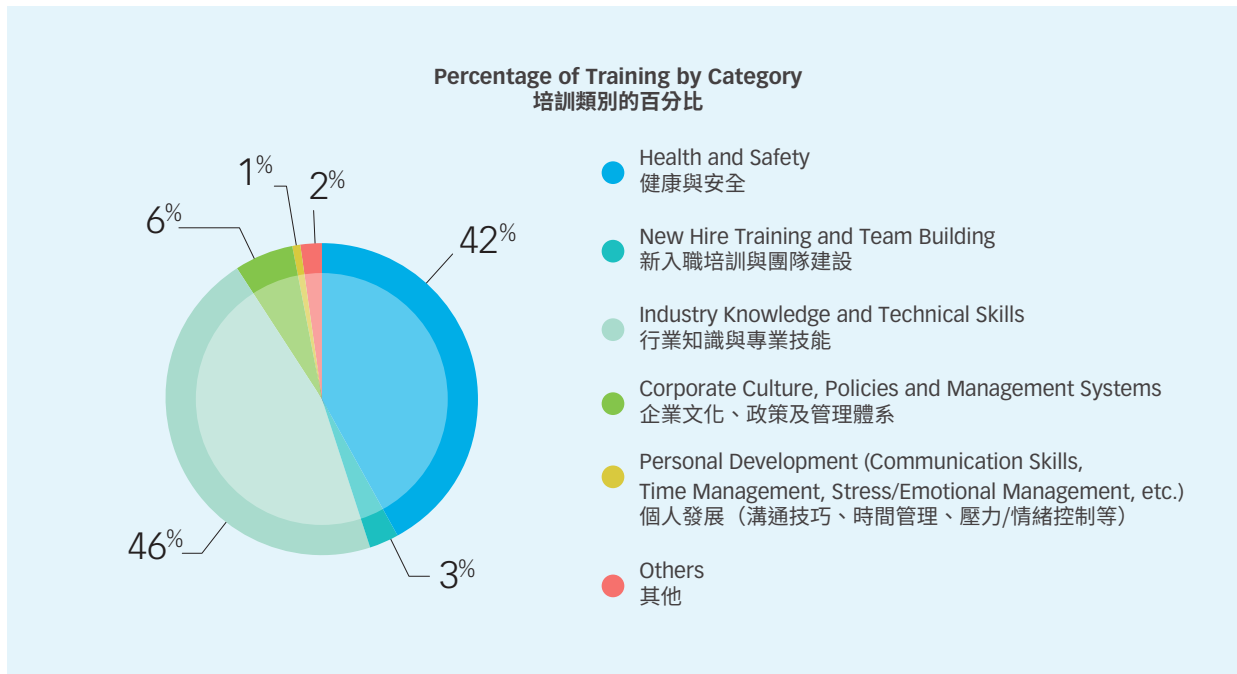
Middle-level management
中層管理人員

51.82

General and technical staff
一般及技術員工

64.20

Talent Development 人才發展



In 2022, the Group initiated the following measures to promote employee development plan, aiming to establish a proactive and creative employee team.

二零二二年，本集團推行了以下員工發展計劃，務求建立一支積極自主且具有創造力的人才隊伍。

Safety Production Emergency Training Drill 安全生產應急培訓演練

Everbright Water adheres to the principle of "obeying the production safety law and being the first person responsible", and has carried out a number of safety operation trainings and drills for emergency response and disaster prevention and flood prevention. Everbright Water also organised a series of "Safe Production Month" activities that combine solving the current outstanding problems in production safety with the implementation of normalised epidemic prevention and control, major inspections of production safety, and special rectification of production safety to enhance and improve tasks, so as to promote the implementation of the production safety responsibility system of all parties. In addition, the Group carries out safety training and drills according to local conditions which can effectively improve employees' own safety awareness, protect the occupational health and safety of employees, and enhance the ability in timely handling emergency accidents.

光大水務堅守「遵守安全生產法，當好第一責任人」的原則，開展了多個應急、防災防汛及在有舉辦一系列「安全生產月」活動。該活動把解決當前安全生產突出問題，與落實常態化疫情防控、安全生產大檢查、安全生產專項整治鞏固提升任務相結合，以推動落實各方安全生產責任制度。並且因地制宜地開展安全培訓和演練活動，切實提高員工自身安全意識，有效保障員工職業健康安全，切實提升本集團應對緊急事故的反應速度和統籌處理能力。

Talent Development 人才發展

Comprehensive Appraisal System

綜合考核機制

According to its internal assessment mechanism, the Group closely monitors its employees' career development by setting achievable goals along with on-going evaluation. This mechanism also cultivates outstanding employees who embrace the core values of the Group and will improve their welfare as an encouragement.

根據內部考核機制，本集團向員工制定確切的工作目標及持續性的評估以便監察員工的職業發展與績效。通過此機制，本集團能夠培養擁護其核心價值的優秀員工，並提高相關的人才待遇，從而激勵員工。

Tiered Talent Development Strategy

梯隊式人才佈局

The Group established a managerial and technical backup talent pool to recognise high-performing talents and provide them with prioritised internal promotion opportunities.

建立後備幹部人才庫，優先為高績效人才提供內部晉升機會。

Apprenticeship Programme

「師帶徒」計劃

Based on the concept of "passing on the torch", the Group arranges the skilled workers to lead newcomers, which effectively passes valuable skills and knowledge to the new employees. This programme enables the new employees to familiarise themselves with the new environment and establish their own practical career plan.

基於薪火相傳的理念，本集團希望通過讓熟練技工帶領新技工工作，把珍貴的技術知識一代傳承一代，並協助新員工融入新環境並制定職業生涯計劃。

Technical Talent Training Programme

技術型人才培訓計劃

Through "Industrial-Academic" collaboration, the Group invited local and overseas technical experts to provide training for both managerial and technical employees of the Group's projects, thus developing its own talents as well as its talent team.

光大水務持續加強「產學研用」協同創新，精心部署海內外技術專家對項目管理層及技術人員進行培訓與交流，不斷培養人才及引領自身人才隊伍的發展。

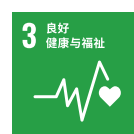
Safeguarding Employees



Employee Diversity and Equal Opportunity

Everbright Water has established the *Staff Handbook* and *Code of Conduct* to standardise the principles of recruitment management. The purpose is to ensure that employees and job seekers receive fair and transparent assessment and employment opportunities. In order to ensure equal remuneration, career prospects and training opportunities for employees and job applicants, there will be

保障員工



員工多元化與平等機會

光大水務訂立了《員工手冊》及《行為守則》以規範招聘管理原則，確保員工及求職者獲得公平透明的考核與就業機會。為保障員工及求職者的報酬、職業前景和機會培訓均等，不會因性別、年齡、種族、國籍、婚姻狀況、宗教等因素而產生任何歧視，《員

Talent Development 人才發展

no discrimination due to factors such as gender, age, race, nationality, marital status, religion, etc. The *Staff Handbook* and *Code of Conduct* cover topics including salary and dismissal, recruitment and promotion, working hours, holidays, equal opportunities, diversity, anti-discrimination, prevention of child labour and forced labour, and other benefits and welfare. The Group attaches great importance to the development of a clean and integrity culture. Therefore, the *Code of Conduct* stipulates the Group's expectations for employees' moral behaviour and integrity. It clarifies the employee's ethical standards and implementation of anti-corruption work. Such code also covers topics such as anti-bribery, anti-extortion, anti-fraud and anti-money laundering. The Group provides long-term and phased training courses on various employment policies and measures for employees and gives implementation guidance to improve the Group's overall awareness of anti-corruption and integrity construction and the overall level of clean government construction. In addition, the Group regularly reviews the recruitment procedures to ensure that the recruited employees meet the legal working age at the time of recruitment, and has never employed child labour or forced labour. The Group also complies with by international conventions on labour and human rights, respects and protects the rights and interests of every employee, and improves the salary and welfare system to ensure that employees receive reasonable salaries, benefits and holidays, and ensures that there is no forced labour. During the Reporting Period, there was no case related to discrimination, or violation of human rights, and no incident of child or forced labour. Through the strict implementation of the above series of measures, the Group's risk of human rights violations and use of child labour or forced/compulsory labour is low. In view that the water and engineering industries are mainly dominated by male, the Group pays special attention to gender equality and remuneration issues, striving to ensure employees' remuneration levels and composition are not affected by gender. Meanwhile, various measures are implemented to encourage female talents to join and continue contributing to the Group. The Group has established a sound human resources management system, with a dedicated working group in the Human Resources Department dealing with matters related to equal opportunities.

工手冊》及《行為守則》列明薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、多元化、反歧視、防止童工及強制勞動以及其他待遇及福利等議題。本集團注重廉潔文化建設工作，因此《行為守則》訂明本集團對員工道德行為及誠信的期望，明確員工道德準則與落實反貪倡廉工作，內容具體說明涵蓋防賄賂、防勒索、反欺詐及反洗錢等議題。本集團長期階段性為員工提供有關各僱傭政策及措施的培訓課程並給予實行指導，提升本集團整體反腐倡廉意識及廉政建設整體水平。另外，本集團定期檢討招聘程序，在招聘時確保所聘用的員工符合法定工作年齡，絕不僱用童工及強制勞工。本集團亦遵守勞工和人權的國際公約，尊重和保障每個員工的權益，並完善薪酬福利體系，確保員工獲得合理的薪酬、福利和假期，以及沒有強迫勞工。報告期內，本集團沒有出現任何與歧視相關的事件，亦未發現僱用童工或強迫／強制勞動之案例，以及不存在侵犯人權之事件。透過嚴格執行以上一系列的措施，本集團在侵犯人權和使用童工或強迫／強制勞動方面的風險為低。鑒於從事水務和工程相關行業的人力資源分佈側重於男性，本集團特別重視性別平等與薪酬待遇等議題，務求使員工的薪酬水平及結構不受性別因素影響，同時積極採取多種措施，吸引更多女性加入並保障女性員工平等的勞動權利，全力支持及協助她們在本集團中的職業發展和留任。

Talent Development 人才發展

In order to practice multiculturalism, the Group has established a sound human resources management system. A dedicated group under the Human Resources Department handles issues related to equal opportunities, and establishes and promotes an inclusive culture within the organisation. Additionally, such team immediately reports any inequality or discrimination to the relevant management personnel with timely correction of misconduct. During the Reporting Period, the Group organised a series of training activities such as “Corporate Culture Training” and “Caring for the Health of Female Employees and Creating a Harmonious Life Together” to strengthen the Group’s diverse and inclusive culture.

Two-Way Communication

The Group upholds the management concept of high standards and high transparency and attaches great importance to the transparency and integrity of its operations. Additionally, the Group encourages its employees to report illegal or improper conducts that have occurred or are suspected to be occurring in order to prevent any damage to its reputation and to avoid any economic losses, so as to ensure healthy corporate governance and efficient daily operations. The employees can directly communicate with the CEO and/or the Chairman of the AC via email in accordance with the *Reporting Policies and Procedures for Misconduct* and file anonymous grievance or express opinions in areas such as labour relations, human rights, workplace harassment and discrimination, and all information collected will be kept confidential.

Employee Benefits

Employee welfare is an important factor in attracting and retaining talents. Therefore, the Group continues to improve the employee welfare system, upholds the “People-Oriented” philosophy, and strictly complies with the statutory requirements of the regions where it operates, providing its employees with comprehensive and adequate welfare protection in various areas.

為實踐多元文化，本集團建立了健全的人力資源管理體系，由人力資源部的專責工作小組處理平等機會的相關事宜，以及在機構內建立及宣揚共融文化，並且在發現任何不平等或歧視行為時立即向相關管理階層人員報告，及時糾正不當行為。於報告期內，本集團舉辦了一系列「企業文化培訓」、「關愛女性職工健康，共創和諧生活」等培訓活動，以強化本集團的多元及包容文化。

雙向溝通

本集團秉持高水準與高透明度之管治理念，高度重視企業運營過程中的行政透明與廉潔，鼓勵員工對發生或懷疑已發生、有可能發生的行為提出舉報和投訴，積極檢舉揭發廉政違紀行為，以避免損害本集團聲譽或任何經濟損失，從而保障健康的企業管治及高效的日常運轉。員工可根據《不當行為的舉報政策及程序》透過電子郵件與總裁及／或審計委員會主席直接進行溝通等方式，就勞資關係、人權、職場騷擾及歧視等範疇上進行舉報及提出匿名申訴或發表意見。過程中所收集的資料均會保密，以保護舉報人。

員工福利

員工的福利待遇是吸引及留住人才的重要因素，因此本集團不斷完善員工的福利制度，秉持「以人為本」的理念，嚴格按照運營地區的法定要求，全方位提供優厚的員工福利待遇條件。

Provision of Employee Benefits and Protection 為員工提供的主要福利與保障

Providing adequate welfare and safeguard to regular employees 為正式員工提供足夠的福利保障



Life insurance
人壽保險



Medical insurance
醫療保險



Disability insurance
傷殘保險



Maternity and paternity leave benefits
產假及侍產假等福利



Distributing bonuses based on the employees' performance
按員工表現派發獎勵花紅

Assisting employees in retirement planning 協助員工規劃退休生活



Compulsory pension insurance
法律規定的強制性養老保險



Employee supplementary pension benefits are established as additional retirement benefits
建立了員工補充養老補貼作為額外的退休福利

Ensuring physical and mental health of employees 促進員工的身心健康



Various entertainment facilities are set up in the project companies
在項目公司設置了各種文娛設施



Regularly organise various team building activities, such as sports competitions and outings
定期舉辦體育競賽和郊遊等康體活動



Free medical check-ups and occupational disease surveillance examinations for the employees every year
每年為員工提供免費的身體檢查服務及職業病防範檢查



Provide employees with physical and mental health seminars to enhance employees' ability for work-life balance
為員工提供身心健康講座，協助員工增強平衡好工作和生活的能力

Improving female staff's welfare 提升女性福利



Provide the employees with adequate maternity leave
給予員工充足的產假



Reserve positions for female employees who are on maternity leave and encourage them to return to work after delivery, and ensure that their career development and salary are not affected
為正在放產假的女性員工保留職位，鼓勵她們分娩過後重返崗位，並保證其職業發展和薪酬不會因此而受影響

Talent Development

人才發展

Maternity/Paternity Leave Statistics in 2022

二零二二年產假/侍產假數據



Female
女



Male
男

Number of female and male employees who took maternity/
paternity leave in 2022

二零二二年放產假/侍產假的男女員工數目

38

41

Number of employees who returned to work after maternity/
paternity leave in 2022

二零二二年產假/侍產假結束後重返工作崗位的員工數目

16

37

Number of employees who returned to work after maternity/
paternity leave ended in 2021 and were still employed by the
end of 2022

二零二一年產假/侍產假結束後重返工作崗位並於
二零二二年底仍在職的員工總數

20

27

Percentage of employees who returned to work after maternity/paternity leave ended in 2022

二零二二年產假/侍產假結束後重返崗位的員工比例

57.14%

92.50%

Percentage of employees who returned to work after maternity/paternity leave ended in 2021 and were still employed by the end of 2022

二零二一年產假/侍產假結束後並於二零二二年底
仍在職的員工比例

86.96%

90.00%

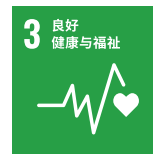
Occupational Health and Safety



The Group pays great attention to the occupational health and safety of its employees, actively creates a healthy and safe working environment for employees, and lays a solid foundation for project implementation. The Group also conducts

regular occupational health examinations for its employees, and provides and distributes the necessary protective equipment to prevent the occurrence of occupational diseases. The Group implements and continues to strengthen high-quality health and safety management systems at all projects in operation and under construction to reduce operational risks and protect the health and safety of employees.

職業健康與安全



本集團高度關注員工的職業健康與安全，積極為員工創造一個健康安全的工作環境，打好項目實施的基礎；定期為員工開展職業健康體檢並配備和下发必要的

勞動保護用品，防範職業病的發生。本集團在旗下各建設、運營項目項目推行並持續加強高質量的健康與安全管理體系，以降低運營風險並保障員工的健康與安全。

Health and Safety Management System

The Group continues implementing the ESHS Management System and Risk Management System strictly at all levels and achieves standardised management in all processes of project investment, construction and operation through SOP. Each project company has established an ESHS management team and a sound emergency notification system to identify and manage the potential safety risks in the entire project cycle. A comprehensive investigation will be conducted after a serious accident, including the cause of the accident and related risks, accident prevention and rectification measures, and lessons learned from production safety management, so as to comprehensively prevent possible future accidents. In addition, the Group has incorporated climate change risks into Risk Management System to minimise the potential risk of natural disasters in future business operations. The Group's Safety and Environmental Management Committee is responsible for regulating, supervising, and leading the implementation of environmental and safety work in each project of the Group, and holds regular meetings to review the Group's ESHS Management System. At the same time, the Group actively listens to the opinions of employees at all levels on the ESHS Management System, operational safety systems and measures, and hopes to improve the management system by understanding opinions from all parties. Meanwhile, the Group also refers to the internationally recognised ISO 45001 Occupational Health and Safety Management System to ensure operational safety.

健康與安全管理體系

本集團持續在各級單位嚴格實施ESHS管理體系和風險管理體系，並通過SOP的方法，全面規範各環節的內部管理及風險管控。每個項目公司均建有ESHS管理團隊及完善的事務通報系統，以及時識別和管理整個項目週期中的任何隱患和不安全因素。本集團亦會在嚴重意外事故發生後進行全面調查，內容包括事故發生原因及相關風險、事故防範和整改措施、總結安全生產管理方面的經驗教訓等，以全面防範工傷事故再次發生。此外，為以最大程度減低企業未來運營因自然災害而受到的潛在影響，本集團亦將氣候變化風險納入風險管理體系。本集團設立了安全與環境管理委員會，負責重點規範、監督本集團各項目環境及安全工作的執行情況，並透過定期會議檢討及完善本集團的ESHS管理體系。同時，本集團積極聆聽各級員工對於ESHS管理體系、運營安全制度及措施的意見，期望透過了解各方意見以便完善管理體系。本集團亦參照國際認可的ISO45001職業健康安全體系，保障運營安全。



Talent Development 人才發展

In order to standardise the management of suppliers, on-site third-party contractors and subcontractors, the Group has extended the ESHS Management System to its supply chain by specifying the relevant requirements in the contracts, and has regularly carried out in-depth evaluations of the health and safety performance of its major suppliers. The Group has formulated and implemented the *Contractors ESHS Management Measures* to identify and control risks related to the environment, society and safety in the supply chain by reviewing the contractors from different aspects, including background, qualifications, performance, safety production and environmental protection.

The Group conducts an internal ESHS on-site audit for all of its projects, both in operation and under construction every year, covering safety training and drills, fire safety management, traffic safety, vehicle use, pandemic prevention and control, environmental safety and waste water treatment. It evaluates the low, medium and high risk factors based on their severity and impact to minimise the impacts of projects on local environmental, safety, health and social aspects.

為規範對於供應商、駐場第三方承包商及分包商的管理工作，本集團將ESHS管理體系的相關要求納入合約中，並定期組織對主要合作商的健康與安全績效進行深入持續的評估。本集團擬訂並落實了《承包商ESHS管理標準》，透過審視承包商的公司背景、資質、業績、安全生產及環保等各方面的綜合表現，辨識和管控供應鏈中與環境、社會和安全相關的風險。

本集團每年會為旗下所有其他的運營及在建項目進行一次內部ESHS現場審核，內容涵蓋安全教育培訓與演練、消防管理、交通安全、車輛使用、疫情防控、景區安全及污水處理，並根據嚴重性及影響評定低、中、高風險因素，將項目對當地環境、安全、健康和社會方面的影響降至最低。



Constructing Projects with High Safety Standard

The Group firmly believes that designing and constructing projects according to safety standards and strengthening construction site management are the basic principles for ensuring construction safety. The Group has continuously improved its project construction rules and regulations, and issued guidelines on the scientific master programme for construction and the construction management of standardised projects, so as to enhance the level of on-site standardised management. The Group has continuously strengthened the management and audit of contractors and suppliers, and conducted a number of special safety and environmental inspections to eliminate violations. The Group has also arranged for all construction projects to sign *Letters of Safety Responsibility for Construction Unit* with the relevant construction contractors, thereby enforcing the safety production responsibility of the construction units and promoting the principle of "Everyone Is a Safety Officer who Should be Responsible for Safety".

Safety Measures in Place at Project Facilities

The Group has implemented a series of safety measures, including erecting fences at the edges of waste water tanks, and using materials with non-slip surfaces for passages near water. During the pandemic, the Group strengthened disinfection, frequently cleaned and disinfected high-touch surfaces, and kept the air circulated and clean to prevent and control the spreading of virus to protect the employees' health.

項目安全施工高標準化

本集團堅信按照安全標準設計及建設項目並加強施工現場管理是保障施工安全的基本原則。本集團持續完善工程建設規章制度，為科學編制工期計劃和規範組織項目建設管理提供指引，從而提升工程現場的標準化管理水平；同時不斷加強管理與考核施工方和供應商，開展多種安全與環境專項檢查工作，杜絕違章行為。本集團更安排所有建設項目均與施工單位簽訂《施工單位安全責任書》，落實施工單位安全生產責任，倡導「人人都是安全員、人人都為安全負責」。

項目設施已採用的安全措施

本集團已實施一系列安全措施，包括在污水缸邊緣架設圍欄，以及在近水的通道採用有防滑表面的物料等。疫情期間，為保障員工健康安全，本集團對環境加強消毒，定期清洗和消毒常接觸的表面，並保持環境通風和清潔，堅定做好疫情防務，保障員工健康。



Talent Development 人才發展

Safe Protection Programmes

The Group protected its employees' health by providing annual medical check-ups and occupational disease surveillance in encouraging employees to take care of and protect their health. Moreover, the Group set up an Employee Safeguard and Safety Fund, which can be disbursed upon application to support employees who suffer from accidents or diseases, relieving the financial burden of their families.

Emergency Management and Safety Training

Each of the Group's operating projects has implemented emergency response plans for all types of accidents that may occur at different stages of the project to assist its employees in responding to accidents and emergencies. It helps to swiftly and effectively control and deal with the accidents that occur. Such an emergency response plan is executed by the project safety management team, while the scope of safety risk management includes the project company and neighbouring communities. The team is responsible for regular provision of health and safety training for its employees, covering emergency response plans, operational hazards, legal issues, etc., with the aim of improving its employees' crisis management skills and knowledge, and ensuring that emergency plans can be immediately and efficiently activated when needed.

The Group pays special attention to the physical and mental health of employees, and encourages employees and outsourced workers to leave the workplace immediately when they encounter any situation which, in their belief, may lead to danger or disease during work. Accordingly, they should report the relevant situation to the project safety management team and the employees will not be subject to disciplinary or other adverse treatment as a result.

安全保障計劃

為保障員工身心健康，本集團每年為員工提供醫療檢查及職業病監測，督促員工關注自身健康狀況及保障員工健康。此外，本集團設立了員工保障及安全基金，在員工不幸發生工傷事故或患病時，可以申領基金以紓緩員工家庭經濟壓力。

緊急事故應對及安全培訓

本集團各運營項目皆專門設有應對不同階段各種事故的應急預案，以協助員工應對緊急事故，迅速有效地控制和處理發生的事故。應急預案由項目安全管理團隊執行，安全風險管理範圍包含項目公司及周邊社區。該團隊負責定期為員工舉辦健康與安全培訓，包括緊急應對計劃、運營操作危害、法律等議題，務求提高員工的安全意識以及應對危機時的處理技巧和知識，確保能在意外發生時迅速高效地啟動應急預案。

本集團格外注重員工的身心健康，鼓勵員工及外判工人在工作中遇到任何他們認為可能導致危險或疾病的狀況時，應立刻離開該環境，並向項目安全管理團隊報告相關狀況；我們保障他們不會因此而遭受處分或其他不利的對待。

Talent Development 人才發展

Through comprehensive trainings, the Group aims to inspire its employees to acknowledge the importance of safety management, laying the foundation for a better daily safe production at workplace. The Group's health and safety trainings cover the following topics:

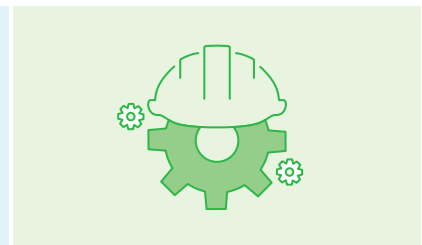
本集團致力於舉辦培訓活動，旨在激發員工對安全管理工作的認識與思考，為更好地開展工作場所日常安全生產管理工作打下基礎。本集團的健康與安全培訓內容包括：



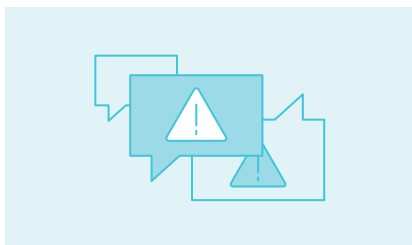
Health and Safety Laws
and Regulations
健康與安全方面的
法律法規



ESHs Management System
ESHs管理體系



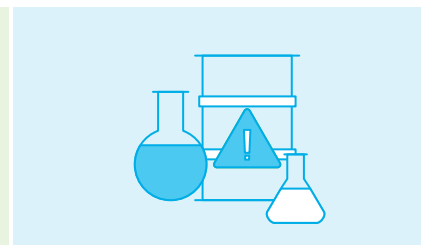
Safe Use of
Equipment
設備裝置的安全使用



Recognition and Control of
Hazard Sources
危險源的辨識和
控制措施



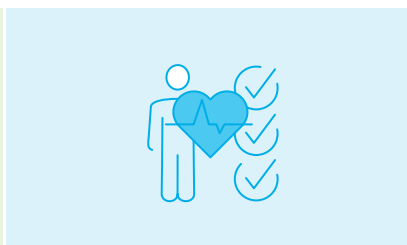
Risk Monitoring and Assessment
at Different Risk Levels
風險分級管控和
隱患排查



Procurement and
Storage of
Hazardous Items
採購及儲存危險物品



Emergency Management
事故應急管理



Occupational Health
Management
職業健康管理



First Aid
急救

Besides the Group's employees, the Group also provides trainings for third-party contractors' and subcontractors' on-site workers, and training topics include the ESHS Management System and incidents response management, etc.

除了本集團員工，我們亦向第三方承包商及分包商駐場工人提供培訓，內容涵蓋ESHs管理體系及事故應急管理等。

Talent Development 人才發展

In 2022, the total health and safety training hours of the Group were **approximately 138,578 hours**.

二零二二年，本集團的健康與安全培訓總時數約為**138,578小時**。

During the Reporting Period, the Group continued carrying out the “Safe Production Month” initiative and fully implementing the “Three Zeros” goal (zero work safety accident, zero excessive discharge of pollutants and zero case for violation of laws and regulations) through themed activities, training and education, safety inspection and emergency drills across all project companies.

報告期內，本集團透過舉辦「安全生產月」活動，內容包括主題宣講、培訓教育、安全檢查、應急演練等，在所有項目公司深入貫徹「三個零」目標（零安全事故、零超標排放、零違法規）。

Case Study 個案分享

Confined Space Operation and Emergency Rescue Drill conducted by Everbright Water (Jiangyin) Limited 光大水務（江陰）有限公司開展有限空間作業和應急救援演練

During the Reporting Period, Everbright Water (Jiangyin) Limited organised confined space operations and emergency rescue drills. The emergency rescue, drill evaluation and other activities can effectively develop the professional ability of the emergency team, and verify the feasibility and operability of the emergency plan. The drill strengthened the participants’ familiarity with the process, equipment and emergency handling, and also put forward some suggestions for some existing deficiencies. The purpose is to ensure that every employee responds to sudden dangerous incidents with normalised and long-term prevention and control, and put unremitting efforts in safety work.

在報告期內，光大水務（江陰）有限公司舉行了有限空間作業和應急救援演練。應急事故救援、演練評價等環節有效鍛煉應急隊伍的專業能力，驗證了應急預案的可行性和可操作性。演練加強了參與人員對流程、設備和突發事件處理的熟悉度，亦對一些存在的不足提出了建議，期望每位員工都以常態化、長效化防控應對突發性危險事件，並對安全作業常抓不懈。



Case Study 個案分享

Flood Control Emergency Drill conducted by Everbright Water (Xinyi) Limited
光大水務(新沂)有限公司開展防汛應急演練活動

To improve employees' ability to cope with flood conditions and effectively implement flood prevention and rescue work, Everbright Water (Xinyi) Limited conducted a flood emergency drill on 19 May 2022. A total of 30 employees from production and functional departments participated. Based on previous flood situations, this drill simulated multiple emergencies in the plant due to sudden heavy rain, such as sudden power outages on power lines, complete shutdown of waste water treatment plant facilities, and failure to discharge rainwater into the plant in a timely and effective manner. In such cases, emergency response needs to be activated immediately. All employees who participated in the flood control drill were taking it very seriously and therefore, this activity was very effective in training the coordination and cooperation ability of the employees in emergency rescue, so that all employees can respond calmly and minimise the disaster losses in case any dangerous situation occurs in the future.

光大水務(新沂)有限公司為提升員工應對汛情及有效實施汛期防抗救工作的能力，於二零二二年五月十九日開展了防汛應急演練，生產人員、職能部門人員共30名員工參與其中。是次演練按照以往發生汛情的情況，模擬廠內因突降大雨而發生多項緊急事故，包括供電線路突發停電、污水處理廠設施全部停止運行、廠內雨水不能及時有效排出等，須要立刻啟動應急救援預案。全體參與此次防汛演練的人員都非常認真，有效地鍛煉了員工應急搶險的協調配合能力，令公司在將來實在發生險情時，全員都能不慌不忙地應對，將災害損失降低到最小程度。



Talent Development 人才發展

Establish a Safety Culture to Ensure Safe Operation

Based on the long-term goal formulated by the Group in 2020, the Group is committed to maintaining the average work injury rate at 0.25 or below from 2020 to 2030. During the Reporting Period, the Group continued to strengthen daily inspections on safety, environment and occupational health, and investigations of potential safety hazards. These inspections ensure that various safety systems are strictly implemented in all projects under construction and in operation. The Group also regularly organises emergency drills to improve the employees' crisis response skills.

建立安全文化保障安全運營

鑒於本集團於二零二零年制定的長期目標，秉持將工傷率於二零二零至二零二零年間平均維持於0.25或以下的使命，本集團於報告期內加強安全、環境與職業健康的日常檢查工作，排查安全隱患，確保所有在建及運營項目嚴格執行各項安全制度，並定期為員工安排應急演習，藉此提高員工應對危機時的處理技巧。

Occupational Health and Safety Statistics in 2022

二零二二年職業健康與安全數據統計

Total working hours 工作總時數

Employees of Everbright Water
光大水務員工

4,673,024 hours
小時

Third-party contractors and subcontractors
working on-site
第三方承包商及分包商駐場工人

1,091,184 hours
小時

Employees 員工

Number of work-related
fatalities
因工死亡個案

0

Number of high-consequence
work-related injuries
(excluding fatalities) ⁽¹⁾
嚴重工傷個案
(不包括死亡個案) ⁽¹⁾

0

Number of work-related
injuries
工傷個案

0

Number of occupational
disease cases
職業病個案

0

Rate of work-related injuries ⁽²⁾
工傷率 ⁽²⁾

0

Days of absence from work
due to work-related injury
因工傷缺勤日數

0

Number of fatalities due to
occupational disease
因職業病死亡個案

0

Third-party contractors and subcontractors working on-site 第三方承包商及分包商駐場工人

Number of work-related fatalities 因工死亡個案 0	Number of high-consequence work-related injuries (excluding fatalities) ⁽¹⁾ 嚴重工傷個案 (不包括死亡個案) ⁽¹⁾ 0	Number of work-related injuries 工傷個案 0	Number of occupational disease cases 職業病個案 0
Rate of work-related injuries ⁽²⁾ 工傷率 ⁽²⁾ 0		Days of absence from work due to work-related injury 因工傷缺勤日數 0	Number of fatalities due to occupational disease 因職業病死亡個案 0

Notes:

- ⁽¹⁾ High-consequence work-related injuries (excluding fatalities) refer to work-related injuries causing the worker being unable to recover fully to pre-injury health status within 6 months.
- ⁽²⁾ Rate of work-related injuries = (Total number of work-related injuries/Total working hours) × 200,000.

附註：

- (1) 嚴重工傷 (不包括死亡個案) 是指導致工作者無法或難於六個月內恢復至受傷前健康狀態的工傷。
- (2) 工傷率 = (工傷個案總計 / 工作總時數) × 200,000。



**WE CLOSELY
CO-OPERATE WITH
STAKEHOLDERS**

AND MAKE
ACCOMPLISHMENTS
HAND IN HAND

**與持份者緊密合作，
攜手共創輝煌**

Stakeholder Engagement 持份者參與

GRI 2-29

Over the years, Everbright Water has made continuous efforts to fulfill its corporate responsibilities and obligations. The Group is committed to promoting community development, eco-friendly infrastructure and sustainability. As a leading water environment management enterprise, the Group also actively participates in charity events, spreading warmth and positive energy by organising community activities.

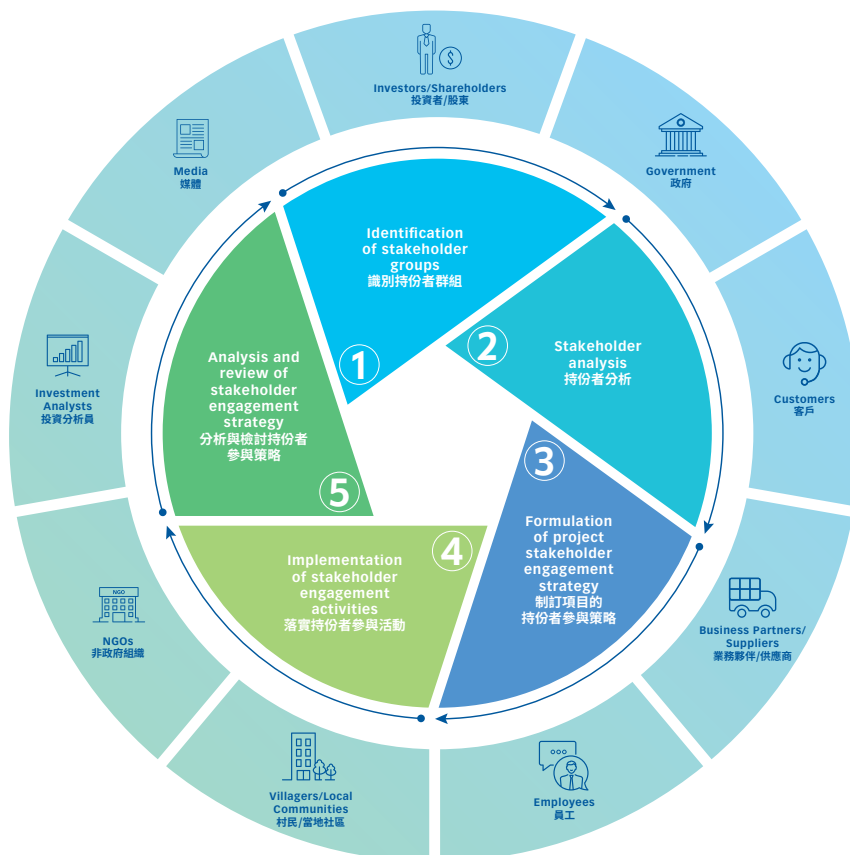
多年來，光大水務不斷努力履行企業責任和義務，致力於促進社區發展、環保基礎設施和可持續發展。作為領先的水環境治理企業，本集團亦積極參與公益活動，通過組織社區活動傳遞溫暖和正能量。

Stakeholder Engagement Plan

The Group recognises the importance of giving back to the community, and is always mindful of the impacts of its business activities on various stakeholders. Everbright Water has formulated a comprehensive stakeholder engagement plan at the project level, by fully considering and evaluating each project's impacts on local stakeholder groups. The Group also formulates corresponding strategies to address stakeholder concerns, mitigate project risks and create shared value for stakeholders. The Group's stakeholder engagement plan consists of the following five steps: identification of stakeholder groups, stakeholder analysis, formulation of project stakeholder engagement strategy, implementation of stakeholder engagement activities, and analysis and review of stakeholder engagement strategy.

持份者參與計劃

本集團深知回饋社會的重要性，並時刻關注其業務活動對各持份者的影響。本集團已在項目層面制訂了全面的持份者參與計劃，充分考慮及評估每個項目對當地持份者群組的影響，並制定相應的策略，回應持份者的關注、降低項目風險及構建共同價值。本集團的持份者參與計劃由以下五個步驟組成：識別持份者群組、持份者分析、制訂項目的持份者參與策略、落實持份者參與活動及分析與檢討持份者參與策略。



Stakeholder Engagement

持份者參與

1

Step 1: Identification of stakeholder groups

第一步：識別持份者群組

The Group uses a systematic approach to identify stakeholders who may be directly or indirectly affected by each project. The first step of identifying stakeholders is to delineate the geographical boundaries of the area likely to be affected by the project. In addition to the construction site and the areas where the project facilities are located, the Group also considers all nearby facilities that could potentially be affected by the project, including other local public utilities and roads. Other sources of impact on stakeholders include the project's air emissions, effluent, off-site transportation of materials and waste, and the impact on local economies through job creation along the supply chain. In addition, the Group attaches great importance to the potential impacts on local ecology. Therefore, during the process of stakeholder identification, the Group actively engages local NGOs, experts, universities and government departments that are involved in biodiversity initiatives. Based on the results of the comprehensive identification process, the Group establishes a list of stakeholder groups for each project, providing a basis for stakeholder analysis in the next step.

本集團採用系統化的方法識別每個項目中直接或間接受到影響的持份者。在識別持份者的過程中，首先劃定項目的地理影響範圍，除了項目的施工現場及廠區的土地佔用外，還考慮了周邊所有可能受到項目影響的設施，包括當地其他公共設施、交通道路等。其他對持份者的影響來源包括項目的氣體排放、出水、物料及廢棄物的場外運輸，以及供應鏈各環節所創造的就業機會對當地的經濟影響等。此外，本集團高度重視項目對當地生態造成的影響，所以在識別持份者的過程中，亦會積極地邀請生物多樣性倡議的非政府組織、專家和大學及政府部門參與其中。本集團基於全面的識別過程結果，建立項目的持份者群組名單，為下一步的持份者分析提供基礎。

2

Step 2: Stakeholder analysis

第二步：持份者分析

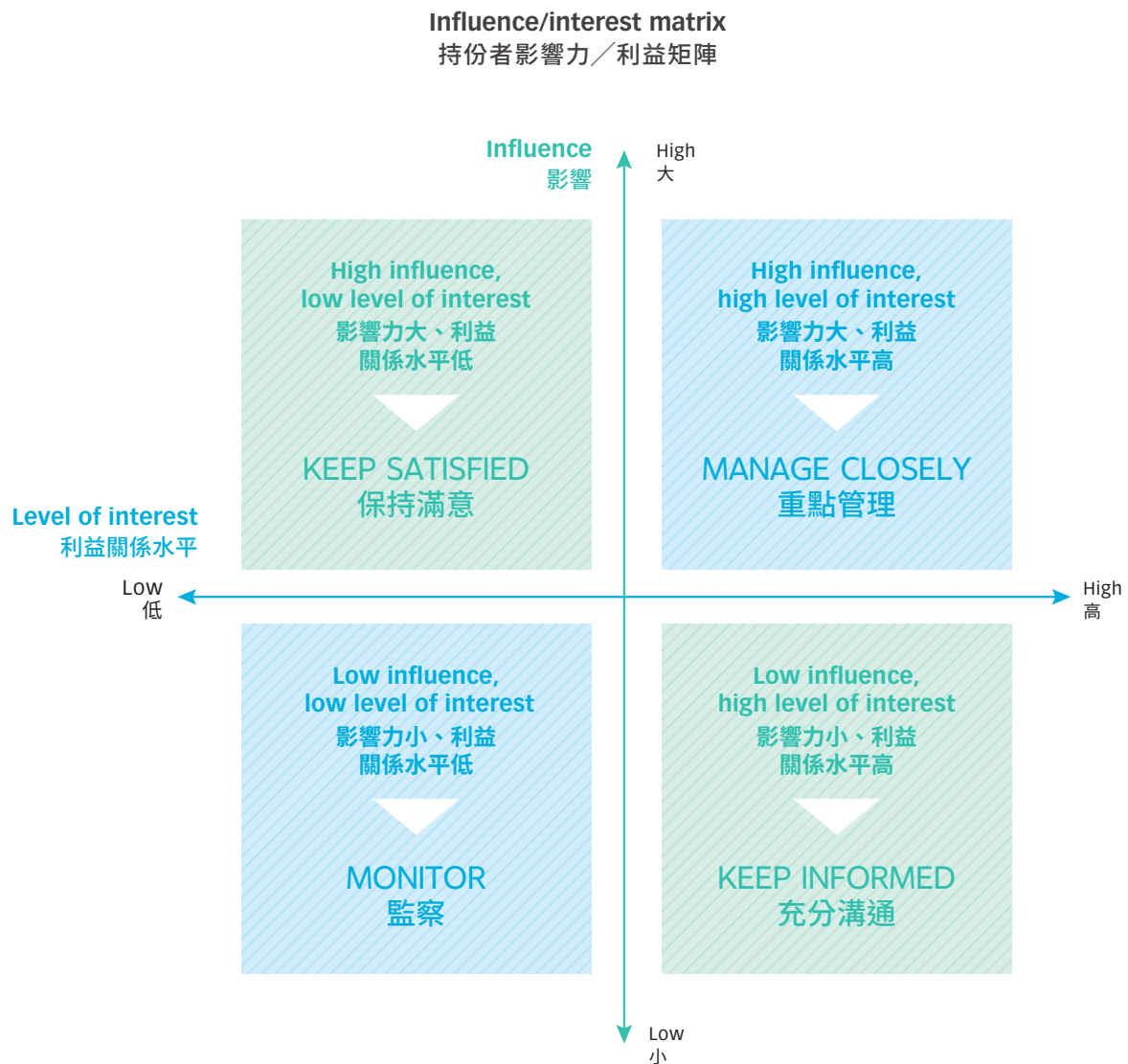
Stakeholder input is one of the key considerations in the Group's decision-making process. It has a significant influence on the risks and successes of the Group's projects and overall business. The major purpose of stakeholder analysis is to understand the needs, interests and influence of different stakeholder groups. Stakeholder analysis provides detailed information that is critical to the development of each project's stakeholder engagement strategies and activities, helping to balance the interests of all parties and ensure successful project delivery.

持份者的意見是本集團作決策時的關鍵考慮因素之一，對本集團項目和整體業務的風險和成敗具有重大影響。持份者分析的核心目的是了解不同持份者群組的需求、利益和影響力，提供對制訂每個項目的持份者參與策略和活動至關重要的詳盡信息，達致平衡各方利益，確保項目得以順利交付。

Stakeholder Engagement 持份者參與

Communicating and interacting with different stakeholder groups using the same level of frequency or methodology is inefficient and often unnecessary. Therefore, the Group prioritises its stakeholder groups and formulates appropriate communication strategies for different types of stakeholders. The Group uses a stakeholder influence/interest matrix to divide stakeholders into four categories according to their level of interest and influence on the project.

與不同的持份者群組進行相同水平及頻密的溝通互動是不合符效益的，在一般情況下亦是不必要的。因此，本集團為持份者群組排列優先次序，並為不同類型的持份者制訂相應的溝通策略。本集團按照持份者群組與項目的利益關係和他們在項目中的影響力，使用持份者影響力／利益矩陣，把持份者分為四個類別。



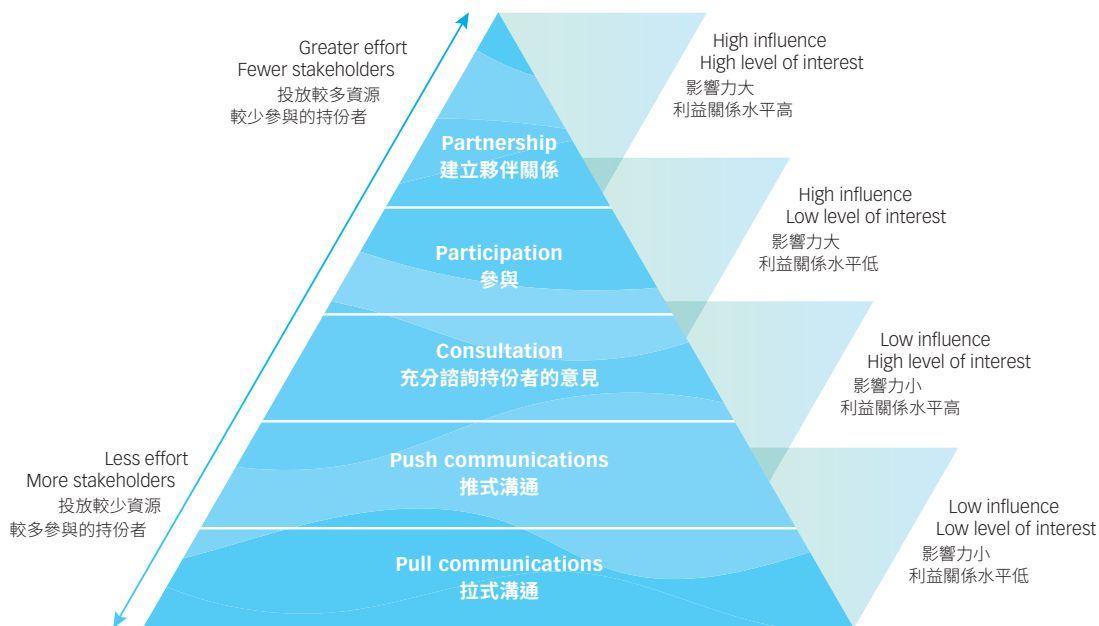
Stakeholder Engagement 持份者參與

3

Step 3: Formulation of project stakeholder engagement strategy 第三步：制訂項目的持份者參與策略

Based on the stakeholder analysis and the influence/interest matrix, the Group has formulated corresponding stakeholder engagement strategies for different types of stakeholders in the project. Stakeholder engagement strategies are divided into the following five levels:

基於持份者分析及持份者影響力／利益矩陣，本集團針對項目不同類別的持份者制訂相應的持份者參與策略，持份者參與策略分為以下五個層級：



- Partnership:** These stakeholders include the Group's shareholders, business partners and local government departments, who have high levels of interest and influence in the project. To maximise their involvement, these stakeholders are invited to participate in different stages of decision-making in the project development and advancement processes.

夥伴關係：這些持份者包括本集團的股東、業務夥伴及當地政府部門等，他們與項目的利益關係密切，亦具有影響力。為了最大限度地提高他們的參與度，本集團會邀請他們參與項目每個階段的決策過程，讓他們參與項目開發和推進工作。
- Participation:** The Group encourages stakeholder participation by assigning them specific roles in the projects according to the project aspects identified as closely related to them. Stakeholder participation leverages the influence of stakeholders to facilitate successful project delivery.

參與：本集團識別出與這些持份者有密切關係的項目領域，並賦予他們特定的職責，以提高他們的參與度，並運用其影響力促成項目的交付。
- Consultation:** The Group frequently consults with stakeholders to seek their support and obtain their feedback on project development.

諮詢：本集團經常與持份者協商並諮詢他們的意見，以確保得到他們認同與支持，並收集有助於項目發展的反饋。

Stakeholder Engagement 持份者參與

- Push communication: The Group regularly provides project-related information to stakeholders via email or other communication channels to facilitate stakeholders' timely understanding of the latest project developments thereby enhancing stakeholders' interest and participation in the project.
推式溝通：本集團定期通過電子郵件或其他溝通渠道向持份者發送項目相關信息，有利於持份者及時了解項目的發展情況，提高項目關注度和參與度。
- Pull communication: For stakeholders with low levels of interest and influence, the Group provides project-related information on its website or other publicly accessible platforms to reduce cost and time for communication.
拉式溝通：持份者對項目開發的興趣或能夠施加影響的機會較低，本集團透過在網站或其他公共平台上提供信息，以減少溝通的成本和時間。

4

Step 4: Implementation of stakeholder engagement activities 第三步：制訂項目的持份者參與策略



The Group's stakeholder communication and consultation guidelines specify the responsibilities of project companies in stakeholder consultation and the frequency of consultation activities. Project companies can organise stakeholder participation activities through appropriate communication

channels according to the local conditions and in accordance with their stakeholder engagement strategy. Project companies also regularly invite stakeholders to express their views on the projects, so that the expectations of stakeholders can be met through effective project development strategies.

本集團的持份者溝通及諮詢指引，訂明了項目公司於持份者諮詢職責分配，以及諮詢活動的頻率。項目公司可以根據當地環境及情況，並按照其持份者參與策略，安排適當的溝通渠道和持份者參與活動，定期邀請持份者對項目發表意見，從而有效滿足持份者的期望，並制定項目發展戰略。



In order to ensure that the rights and interests of local residents, indigenous peoples and other affected groups are fully protected, the Group proactively communicates with these stakeholders at the early stages of each project and ensures that sufficient stakeholder communication activities are conducted in the local dialect to cater for the needs of the indigenous peoples. The Group is committed to maintaining a high degree of transparency of project-related information by disclosing to the public the nature and scope of project and the reasons for land acquisition. By disclosing adequate information, the Group enables the affected groups to fully understand the compensation and resettlement plan for land acquisition, the impacts of the resettlement plan on their future lives, their rights and the grievance mechanisms related to environmental/social compliance.

為充分保障當地居民、原住民及其他受影響群體的權益，本集團積極於每個項目的前期階段開展對話確保有足夠的持份者溝通活動是以當地方言進行，並照顧原住民的需要。本集團致力保持項目相關的資訊透明度，向公眾公開項目的性質、範圍及徵地的原因，並讓受影響群組能夠充分了解收地補償安置方案、安置方案對他們往後生活的影響、他們的權益及與環境／社會合規相關的申訴機制。

Stakeholder Engagement

持份者參與

The Group's stakeholder communication and consultation activities are carried out in an open and transparent manner, and all affected persons can freely express their views without any external manipulation, interference or threat of retaliation. The Group also encourages women and vulnerable groups to participate in consultation activities. Their opinions and concerns will be taken into consideration during project development.

本集團的持份者溝通和諮詢活動以公開透明的形式進行，所有受影響的人士可以自由發表自己的觀點，不受任何外部操縱、干涉或報復威脅。本集團亦鼓勵婦女和弱勢群體參與諮詢活動，並把他們的意見和關注的議題納入項目發展的考慮。

5

Step 5: Analysis and review of stakeholder engagement strategy

第五步：分析與檢討持份者參與策略

The Group regularly reviews the stakeholder engagement activities and stakeholder communication records, and analyses stakeholder complaints (if any). The Group also continuously seek stakeholder feedback on project impacts through consultations and questionnaires at the mid- and late-stages of project development. Thereafter, the Group analyses and reviews the effectiveness of the stakeholder engagement strategy of the projects and makes improvements to the existing project strategy accordingly.

本集團透過定期回顧持份者參與活動、檢視持份者溝通記錄及分析持份者作出的申訴（如有），並且在項目發展的中、後期階段繼續透過諮詢及問卷調查獲取持份者對項目影響的評價，從而分析與檢討項目持份者參與策略的有效性，並根據檢討分析結果改善項目現有的策略。



Stakeholder Engagement 持份者參與

Promotion of Environmental Protection and Education

Everbright Water actively responds to the initiatives announced by the Ministry of Ecology and Environment and the Ministry of Housing and Urban-Rural Development of the PRC by continuously opening its waste water treatment facilities to the public. This further enhances the Group as an advanced hub for public visits and environmental protection promotion that provides on-site visits, practical learnings and technical training concurrently. Multiple waste water treatment plants of the Group received recognition at state, province and city levels, such as “Science Hub for Ecological Environment”, “Environmental Protection Science Hub”, “Ecological Civilisation Education Hub”, “Education Base for Ecological Civilisation Development” and “Science Popularisation and Education Hub”.

Due to the ongoing pandemic, the Group continues to open its projects to the public in various virtual forms. For the treatment plants located in regions where the pandemic is effectively controlled, various physical activities are organised in accordance with relevant safe distancing regulations. Such activities enhance public knowledge of the water resource protection and raise awareness of water conservation.

宣揚環境保護及教育

光大水務積極響應中國生態環境部與住房和城鄉建設部的號召，持續面向公眾開放污水處理設施及廠區，進一步發揮本集團集參觀、實踐、培訓於一體的環保宣傳基地作用。本集團旗下有多座污水處理廠榮獲國家、省、市級「生態環境科普基地」、「環保科普基地」、「生態文明教育基地」、「生態文明教育實踐基地」和「科普教育基地」等榮譽稱號。

因疫情持續，本集團繼續以多種線上形式向公眾開放其項目。在疫情得到有效控制的地區，處理廠亦會在確保安全防疫的條件下，適當組織線下參觀活動，從而增加民眾的水資源環保知識，增強其節水意識。

As of 31 December 2022

截至二零二二年十二月三十一日

A total of
本集團共有

16

projects of the Group were recognised as “Environmental Education Hub” or “Science Popularisation and Education Hub”
個項目獲封「環境教育基地」或「科普教育基地」稱號

A total of
本集團共有

33

projects of the Group were opened to the public
個項目向公眾正式開放

Stakeholder Engagement 持份者參與

Zibo Waste Water Treatment Project Recognised as "Top 10 Environmental Protection Facilities Opened to the Public in Shandong Province 2022" 淄博污水處理項目獲評「2022年山東省十佳環保設施開放單位」

The "Shandong's Advanced Ecological and Environmental Public Participation 2022 Selection" was organised by the Shandong Ecological and Environmental Education and Publicity Centre. Zibo Waste Water Treatment Project was awarded "Top 10 Environmental Protection Facilities Opened to the Public in Shandong Province 2022" and one of its speakers was awarded "Top 10 Speakers for Environmental Protection Facilities Opened to Public in Shandong".

山東省生態環境保護宣教中心組織了2022年山東省生態環境公眾參與領域先進典型選樹活動。淄博污水處理項目獲評「2022年山東省十佳環保設施開放單位」，項目其中一位講解員更被評為「山東省十佳環保設施開放講解員」。



Zibo Waste Water Treatment Project actively puts the vision of ecological civilisation into practice and organises public visits. It promotes low-carbon development concepts and lifestyles through different channels, and educates the public on ecological civilisation and environmental protection.

淄博污水處理項目全力踐行生態文明發展觀，積極開展公眾開放活動，通過不同渠道積極宣傳綠色低碳發展理念和生活方式，推動生態文明理念和生態環保意識在廣大市民心中落地生根。

In 2022
二零二二年

The Group's projects received over
本集團的項目共接待超過

4,832 visitors
名參觀人士

in
合計

185 batches
批次

List of environmental projects that were open to the public
已向公眾開放的環保項目列表

Ji'nan Waste Water Treatment Project (Plant 1) 濟南污水處理項目 (一廠)	Ji'nan Waste Water Treatment Project (Plant 2) 濟南污水處理項目 (二廠)
Ji'nan Licheng Waste Water Treatment Project (Plant 3) 濟南歷城污水處理項目 (三廠)	Ji'nan Xike Waste Water Treatment Project (Plant 4) 濟南西客污水處理項目 (四廠)
Ji'nan Huashan Waste Water Treatment Project 濟南華山水質淨化項目	Xianyang Waste Water Treatment Project 咸陽東郊污水處理項目
Zhangqiu Waste Water Treatment Project (Plant 1) 章丘污水處理廠項目 (第一廠)	Dezhou Nanyunhe Waste Water Treatment Project 德州南運河污水處理項目
Beijing Daxing Tiantanghe Waste Water Treatment Project 北京大興區天堂河污水處理項目	Binzhou Development Zone Waste Water Treatment Project 濱州開發區污水處理項目
Nanjing Liuhe Waste Water Treatment Project 南京六合污水處理項目	Suzhou Wuzhong Chengnan Waste Water Treatment Project 蘇州吳中城南污水處理項目
Lianyungang Dapu Waste Water Treatment Project 連雲港大浦污水處理項目	Nanjing Pukou Industrial Waste Water Treatment Project 南京浦口工業廢水處理項目
Jiangyin Waste Water Treatment Project 江陰污水處理項目	Xinyi Economic Development Zone Waste Water Treatment Project 新沂經濟開發區廢水處理項目
Dalian Quanshui Waste Water Treatment Project 大連市泉水污水處理項目	Dalian Malanhe Waste Water Treatment Project 大連市馬欄河污水處理項目
Dalian Siergou Waste Water Treatment Project 大連寺兒溝污水處理項目	Dalian Chunliuhe Waste water Treatment Project 大連市春柳河污水處理項目
Zhangqiu Waste Water Treatment Project (Plant 3) 章丘污水處理項目 (第三廠)	Sanmenxia Waste Water Treatment Project 三門峽污水處理項目
Ju County Shudong Waste Water Treatment Project 莒縣洙東污水處理項目	Zibo Waste Water Treatment Project (Northern Plant) 淄博污水處理項目 (北廠)
Zibo High-tech Zone Waste Water Treatment Project 淄博韓廟高新區污水處理項目	Zhangdian East Chemical Industry Park Industrial Waste Water Treatment Project 張店東部化工區工業廢水處理項目
Jiangyin Chengxi Waste Water Treatment Project 江陰澄西污水處理項目	Xinyi City Waste Water Treatment Project 新沂城市污水處理項目
Zhenjiang Zhengrunzhou Waste Water Treatment Plant Operation and Management Project 鎮江征潤州污水處理廠委託運營項目	Zhuanghe Waste Water Treatment Project 莊河市污水處理項目
Nanjing Pukou Waste Water Treatment Project 南京浦口區珠江污水處理項目	Zibo Waste Water Treatment Project (Plant 2) 淄博污水處理項目 (二廠) Zibo Zhoucun Waste Water Treatment Project 淄博周村污水處理項目

Stakeholder Engagement**持份者參與****Suzhou Wuzhong Chengnan Waste Water Treatment Project actively promoted green living through “Cloud Popularisation”**
蘇州吳中城南污水處理項目通過「雲上科普」宣導綠色生活

Suzhou Project is an “Education Base for Ecological Civilisation Development” in Jiangsu Province and also a “Science Popularisation and Education Practice Hub” in Suzhou City of Wuzhong District of Jiangsu Province. By sharing pre-recorded videos online and posting them on social media platforms, the Zibo Project educates the public online via “Cloud Popularisation” on topics such as the significant impacts of waste water treatment on ecology and ecological civilisation. It also promotes green and low-carbon lifestyles, and raises public awareness of water conservation, environmental protection and ecological consciousness, thereby attracting public interest in waste water treatment.

蘇州項目是江蘇省「生態文明教育實踐基地」，同時也是江蘇省蘇州市及吳中區「環保科普教育實踐基地」。蘇州項目採取線上錄播的形式，借助媒體平台通過「雲上科普」的形式，帶領公眾了解污水處理對生態環境的巨大影響，普及生態文明知識，宣導綠色低碳的生活方式，引導廣大公眾增強節水、環保、生態意識，從而激發公眾對污水處理科普的興趣。



Stakeholder Engagement 持份者參與

Online visit to Ji'nan Huashan Waste Water Treatment Project via "Cloud Visit" 通過「雲參觀」走入濟南華山水質淨化項目

Huashan Project made use of its educational media platform "Cloud Visit" to organise online visits to its facilities. Huashan Project is the first fully underground waste water treatment project of Everbright Water in Ji'nan that requires minimal workers for monitoring. Huashan Project includes an advanced deodourisation system and demonstrates excellent emission standards. The waste water treatment facilities are highly energy-efficient and integrate perfectly with the above-ground landscape. The online visits allowed citizens to learn about waste water treatment from the comfort of their homes. It was a good capacity-building activity that encourages citizens to equip themselves with relevant knowledge about the city's water environment.

華山項目借助環保科普公眾號，使公眾通過「雲參觀」走入項目廠區參觀。華山項目是濟南市以及光大水務首個全地下式「少人值守」污水處理項目，配套先進的除臭系統，實現高標準排放及綠色節能，使污水處理廠與地面景觀設計完美融合。活動讓市民足不出戶就能直觀了解污水處理知識，從而推動市民身體力行地加入城市水環境改善事業中來。



Advocating Environmental Protection Promotional Campaign 推動環保主題公益宣傳

Everbright Water is an environmental protection company dedicated to water environment management. Over the years, the Group has actively organised charitable environmental protection activities in collaboration with different environmental protection and technology associations as well as government agencies. The Group participates in local and overseas environmental technology activities, and encourages employees to adopt a low-carbon lifestyle. While ensuring compliance with all the social distancing regulations related to pandemic prevention, the Group organises a series of online and offline environmental activities in conjunction with various environmental protection-themed events such as "World Water Day", "Earth Day" and "World Environment Day". Through carrying out such activities, the Group promotes environmental protection concepts and enhances the soft power of sustainable development in the community.

光大水務作為一家以水環境綜合治理為主業的環保企業，多年來一直積極聯同各環保、科技協會及政府機構開展環保公益宣傳活動，參與國內外的環保科技活動，鼓勵員工實行低碳生活。在積極配合疫情防控制態化工作要求的前提下，本集團圍繞「世界水日」、「世界地球日」、「世界環境日」等環保主題節日，開展了線上線下相結合的主題環保公益活動，向當地社區傳播環保理念和知識，提升社區可持續發展軟實力。

Stakeholder Engagement

持份者參與

Everbright Water initiates environmental protection promotional campaigns in conjunction with "World Water Day" and "China Water Week" in 2022 光大水務全面開展2022年「世界水日」及「中國水週」環保公益活動

It was the 30th "World Water Day" on 22 March 2022 and the 35th "China Water Week" on 22-28 March 2022. Everbright Water organised a series of activities in conjunction with "World Water Day" and "China Water Week". Due to the ongoing outbreaks of COVID-19 in different parts of the country, some activities were held via online platforms. While ensuring compliance with all the social distancing regulations in relation to pandemic prevention, both online and offline activities were held under the theme "The Beauty of Harmony between Human and Water". These activities focused on the "Dual Carbons" goals to reduce carbon and waste emissions, demonstrating the Group's vision of "Devoted to Ecology and Environment for a Beautiful China". Some of the activities are disclosed below.

二零二二年三月二十二日是第三十屆的「世界水日」，同時於二零二二年三月二十二日至二十八日是第三十五屆的「中國水週」。隨著「世界水日」和「中國水週」的來臨，光大水務組織了一系列的活動，並在克服疫情影響和嚴格遵循疫情防控要求下，採取線上線下相結合的方式，開展以「人水至美和諧至善」為主題的環保公益活動。活動聚焦「雙碳」目標，積極踐行減污降碳，向公眾展示出「情系生態環境，築夢美麗中國」的美好企業願景。部分活動的情況披露如下。

Jiangsu Jiangyin Waste Water Treatment Project

江陰污水處理項目

Jiangyin Project utilised the new media platform TikTok to film videos about water treatment procedures, water-saving knowledge and speeches for promotion. Jiangyin Project also worked with Camphor Tree volunteers to organise physical campaigns in the Changsan Town Hall. Activities such as setting up information desks, hanging promotion banners and distributing leaflets were conducive to promoting the knowledge about water law and water-saving to the general public.

江陰項目利用抖音新媒體平台，拍攝水處理流程、節水知識宣講視頻進行宣傳；同時與香樟樹義工團隊在城市客廳長山站聯合開展線下主題活動，通過設諮詢台、掛橫幅、發宣傳單等形式，向市民宣傳講解水法和節水知識，強化節水和用水法律意識。

Tongxiang West Area Drinking Water Sources Protection PPP Project
桐鄉西部飲用水源保護建設工程PPP項目

Zhejiang Tongxiang Project organised a water source protection campaign to put the vision of water treatment into practice. The campaign started from the sources of water resources, passing through the pumping station to the water intake station to clean coastal waste. It contributes to building an ecological water resources environment that possesses “Clear water, Free-flow river, Green coast, Beautiful scenery, Ecology, Safety”.

浙江桐鄉項目組織員工開展保護水源地宣傳活動，活動從水源地源頭出發，沿取水泵房至提水閘站，清理河岸垃圾，用實際行動踐行治水理念。為打造「水清、河暢、岸綠、景美、生態、安全」的生態水源地環境貢獻一份力量。

Sanmenxia Waste Water Treatment Project
三門峽污水處理項目

Sanmenxia Project utilised the social media platform of Everbright Water to invite employees and their families submitting their artworks on related themes in the forms of photography, calligraphy, drawing and newspaper manuscript. Some of the artworks were selected as outstanding and exhibited on the social media platform of Everbright Water. This raised people’s awareness of the close connections between water resources and the ecological environment, demonstrating the harmonious and beautiful moments of protecting water resources.

三門峽項目活動通過在光大水務公眾號向全體員工及家屬徵集相關主題內容的攝影、書法、繪畫、手抄報等作品，評選出優秀作品在光大水務公眾號上進行展示，喚起人們對水資源和生態環境的密切關係的關注，發現更多人水和諧的美好瞬間。

Please refer to the chapter entitled “Major Recognitions, Awards and Memberships” of this Report for the details of projects with major education recognitions and major science, technology, and environmental protection education activities in 2022.

有關二零二二年主要項目教育榮譽與主要科技及環保教育活動詳情，請查看本報告的「主要嘉許、獎項及會籍」章節。

Stakeholder Engagement 持份者參與

Caring for the Community and Creating a Harmonious and Inclusive Society



In order to minimise the impacts of project development on the surrounding environment and communities, the Group complies with the relevant guidelines of International Finance Corporation and local laws and regulations. The Group also organises and participates in community charity activities, and strengthens the connection with the community, thus ensuring the projects are in harmony with the surrounding environment and the community. In addition, the Group takes community concerns into account in the design and operation stages of the projects, and highly respects indigenous peoples' values in terms of their own identity, dignity, human rights, lifestyle and culture. This protects and enables them to gain socio-economic benefits that are consistent with their culture and tradition. Where inevitable impacts on such communities are identified at an early stage, the Group will provide adequate and fair compensation and resettlement arrangements for the affected groups, such as indigenous peoples, in accordance with the applicable laws. At the same time, the Group has a confidential grievance mechanism for the relevant parties to raise their concerns. All information collected is handled properly and all grievances are responded by the Group's relevant departments in a timely manner. In 2022, the Group did not receive any grievances.

關愛社區，共創和諧共融社會



為了最大程度降低項目開發對周邊環境和社區的影響，本集團積極遵循相關的國際金融公司指引和當地法律與法規要求，組織參與一系列社區公益活動，加強了旗下項目與社區的聯繫，確保項目與周邊環境和諧共融。此外，在設計和實施項目的過程中，本集團將社區的關注點納入考量，並對原住民自主定義的身份特徵、尊嚴、人權、生活方式和文化特點予以充分尊重，以保護及創造符合當地文化傳統的社會和經濟利益。若本集團於早期階段確定項目將為社區群體帶來不可避免的影響，本集團會按照適用法律為原住民等受影響人士提供公平、充分的補償和安置安排。同時，本集團設立保密申訴機制，以供有需要人士進行申訴，所收集的資料將會被妥善處理，本集團相關部門會適時作出回應。於二零二二年，本集團並沒有收到任何申訴。

Stakeholder Engagement 持份者參與

In terms of public welfare and charity, the Group follows its *Donations and Sponsorships Management Measures* and endeavors to understand society's needs. The Group promotes social, economic and environmental integration to prevent unfair treatment due to various factors such as age, gender, disability, and ensures the well-being of the underprivileged and people in need. With an aim to contribute to environmental protection and create a harmonious society, the Group always encourages employees to participate in charitable activities such as monetary donations, visits, volunteering, blood donations and tree planting, undertaking responsibility for poverty alleviation, education improvement, hazards reduction and environmental protection. During the Reporting Period, the employees of the Group took part in various charitable activities, including fund-raising, visiting disadvantaged households and volunteering.

在公益慈善方面，本集團以其制定的《對外捐贈、贊助管理辦法》為指引，積極了解社區需要，推動社會、經濟和環境共同融洽，使人們不會因年齡、性別、殘疾與否等因素受到不公對待，為弱勢社群和有需要的人士謀取福祉。此外，本集團一直鼓勵支持員工積極參與捐款、探訪、義工、獻血、植樹等公益活動，重點支持國家定點扶貧、愛心教育、災害救助以及生態環境保護等，為環境保護及和諧社會貢獻力量。報告期內，本集團的員工身體力行參與各個範疇的慈善及公益活動，包括自願籌款、到弱勢群體家中進行探訪、進行義務勞動等。



Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標

The Group strives to create and promote development on social and economic aspects, and has aligned its policies with the United Nations' 17 SDGs to address the most pressing environmental, social and economic issues. As a leading water environment management enterprise in China, Everbright Water has launched a series of sustainable development plans and project designs to safeguard the water supply and protect the environment, as well as to create a high-quality living environment for the public. The summary below depicts how the Group's operational policies and activities are closely related to the SDGs.

本集團致力於創造及促進社會和經濟效益，並配合聯合國的17項SDGs，制定一系列政策以應對世界上最緊切的環境、社會和經濟議題。作為中國水環境綜合治理的領軍企業，光大水務透過落實一系列可持續發展計劃和項目設計，保障水資源供應、維護生態環境，同時為公眾打造一個優質的生活環境。以下概述了本集團的運營方針與本集團的活動與SDGs相關性。

Environment

環境

SDGs 可持續發展目標



Ensure healthy lives and promote well-being for all at all ages 確保健康的生活方式， 促進各年齡段人群的福祉

3.9

By 2030, to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

到二零三零年，大幅減少危險化學品以及空氣、水和土壤污染導致的死亡和患病人數。

The Group's Contributions 本集團的貢獻

The effluent discharged from most of the Group's waste water treatment plants complies with or is better than Grade 1A standard of *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002).

本集團大部分污水處理廠的出水均符合或優於《城鎮污水處理廠污染物排放標準》(GB18918-2002)的一級A標準。

Devoted to Achieving Sustainable Development Goals
致力實踐可持續發展目標

SDGs
可持續發展目標



Ensure availability and sustainable management of water and sanitation for all
為所有人提供水和環境衛生並對其進行可持續管理

6.4

By 2030, to substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

到二零三零年，所有行業大幅提高用水效率，確保可持續取用和供應淡水，以解決缺水問題，大幅減少缺水人數。

The Group's Contributions
本集團的貢獻

The Group treated a total of approximately 1,770,260,000 m³ of waste water and produced approximately 43,629,000 m³ of reusable water in 2022.

本集團於二零二二年共處理了約1,770,260,000立方米的污水，並生產了約43,629,000立方米的回用水。

Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標

SDGs

可持續發展目標



Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

建造具備抵禦災害能力的基礎設施，促進具有包容性的可持續工業化，推動創新

9.4

By 2030, to upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking actions in accordance with their respective capabilities.

到二零三零年，所有國家根據自身能力採取行動，升級基礎設施，改進工業以提升其可持續性，提高資源使用效率，更多採用清潔和環保技術及產業流程。

The Group's Contributions

本集團的貢獻

The Group's river-basin ecological restoration projects construct a more stable ecological environment, and thus improve the cities' resilience against regional water environment pollution; meanwhile, its "Sponge City" project facilitates effective drainage and rainwater reuse, strengthens the urban ecosystem and promotes sustainable development.

本集團的流域治理項目通過構建更穩定的生態環境從而提升城市水污染抵禦能力；海綿城市項目則有助疏導和雨水再利用、改善城市生態系統及促進可持續發展。

In addition, Huashan Project is the Group's first fully underground waste water treatment project, commenced operations in August 2018. While undertaking responsibilities for pollution reduction, Huashan Project provides a more pleasant ground environment for local communities.

此外，繼華山項目作為本集團首個全地下式污水處理項目於二零一八年八月正式投運後，本集團亦陸續投資建設數個全地下式污水處理項目，在積極承擔減污職責的同時，華山項目為當地社區提供更加怡人的地面環境。

Devoted to Achieving Sustainable Development Goals
致力實踐可持續發展目標

SDGs
可持續發展目標

The Group's Contributions
本集團的貢獻



Make cities and human settlements inclusive, safe, resilient and sustainable

建設包容、安全、有抵禦災害能力和可持續的城市和人類住區

11.6

By 2030, to reduce the adverse per capita environmental impact of cities, including paying special attention to air quality, municipal and other waste management.

到二零三零年，減少城市的人均負面環境影響，包括特別關注空氣質量，以及城市廢物管理等。

The Group provides a series of water environment management services, such as raw water protection, municipal waste water treatment, industrial waste water treatment, water supply, reusable water, and sludge treatment and disposal, contributing to the development of sustainable cities and communities and minimising the impact of harmful substances on the aquatic and terrestrial ecosystems.

本集團透過一系列的水環境綜合治理服務，包括原水保護、市政污水處理、工業廢水處理、供水、中水回用及污泥處理處置等，為建設可持續城市和社區貢獻力量，並將有害污染物對水體和陸上生態的影響降至最低。



Ensure sustainable consumption and production patterns

採用可持續的消費和生產模式

12.2

By 2030, to achieve sustainable management and efficient use of natural resources.

到二零三零年，實現自然資源的可持續管理和高效利用。

The Group engages qualified third parties to turn sludge into useful materials for the production of compost, construction material, or energy recovery via incineration, so as to reduce environmental impact.

本集團聘請具有資質第三方把污泥回收加工，用於堆肥、建材利用，或透過焚燒回收能源，從而減少對環境的影響。

Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標

SDGs

可持續發展目標



Take urgent action to combat climate change and its impacts

採取緊急行動應對氣候變化及其影響

13.1

To strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

加強各國抵禦和適應氣候相關的災害和自然災害的能力。

The Group's Contributions

本集團的貢獻

The Group's waste water treatment project in Qingdao generates green electricity with biogas produced from sludge treatment so as to replace the consumption of fossil fuel and offset GHG emissions. Meanwhile, the Group utilises waste water nitrogen removal treatment process to reduce nitrogen concentration in effluent and the associated nitrous oxide emission, thus offsetting GHG emissions. The Group's operations offset 113,321.17 tonnes of carbon dioxide equivalent emissions in 2022.

本集團位於青島的污水處理項目利用污泥處理時所產生的沼氣產生綠色電力，替代化石燃料，抵銷溫室氣體排放；而本集團亦透過污水脫氮處理工藝降低污水出水的氮含量以及其所引致的氧化亞氮排放，以抵銷溫室氣體排放。二零二二年，本集團的運營共抵銷了113,321.17噸二氧化碳當量排放。

Furthermore, the Group has included climate change risks as part of its existing Risk Management System, in order to formulate a more comprehensive emergency and natural disaster response plan.

此外，本集團更將氣候變化風險納入現有的風險管理體系中，以制定更全面的緊急與自然災害應變方案。



Conserve and sustainably use the oceans, seas and marine resources for sustainable development

保護和可持續利用海洋和海洋資源以促進可持續發展

14.1

By 2025, to prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution.

到二零二五年，預防和大幅減少各類海洋污染，特別是陸上活動造成的污染，包括海洋廢棄物污染和營養鹽污染。

In an effort to protect the marine ecosystem, the Group ensures that all effluents discharged into the sea are effectively treated in strict compliance with relevant discharge standards.

本集團確保其排放至大海的排水水均經過高效的污水處理，並嚴格滿足相關排放要求，從而保護海洋生態。

Devoted to Achieving Sustainable Development Goals
致力實踐可持續發展目標

SDGs
可持續發展目標



Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

保護、恢復和促進可持續利用陸地生態系統，可持續管理森林，防治荒漠化，制止和扭轉土地退化，遏制生物多樣性的喪失

15.1

To ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular, forests, wetlands, mountains and drylands, in line with obligations under international agreements.

根據國際協議規定的義務，保護、恢復和可持續利用陸地和內陸的淡水生態系統及其服務，特別是森林、濕地、山麓和旱地。

By 2025, to strengthen the Group's disclosure of biodiversity risks.

到二零二五年，加強本集團對生物多樣性風險的披露。

The Group's Contributions
本集團的貢獻

The Group's river-basin ecological restoration projects improve the health of river ecosystems, including riparian habitats, with a total investment of over RMB3.1 billion.

本集團的流域治理項目改善和加強了河道生態系統，其中包括河岸棲息地，總投資額超過31億元人民幣。

Biodiversity risk assessment is included in this Report for the first time to analyse the impact of the Group's economic activities on biodiversity, so as to formulate effective investment and operation strategies to prevent loss of biodiversity.

本報告首次納入生物多樣性風險評估，以分析本集團的經濟活動對生物多樣性的影響，制定有效的投資及運營策略，遏止生物多樣性的喪失。

Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標

Social

社會

SDGs

可持續發展目標



Ensure healthy lives and promote well-being for all at all ages

確保健康的生活方式，
促進各年齡段人群的福祉

3.9

By 2030, to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

到二零三零年，大幅減少危險化學品以及空氣、水和土壤污染導致的死亡和患病人數。

The Group's Contributions

本集團的貢獻

During the COVID-19 epidemic, the Group has put the safety of the water environment as first place and deployed manpower and resources to the front line for pandemic control, ensuring stable and uninterrupted operation of the projects while maintaining compliance with the discharge standards. At the same time, the Group assisted the local government to process and treat the medical waste water and waste water from quarantine sites so as to effectively prevent the secondary transmission of viruses through waste media such as waste water.

新冠疫情期間，本集團將保障水環境安全放在首位，第一時間調集人力物力投入抗疫前線，確保項目穩定運行、達標排放，保障項目服務地區的污水處理暢通無阻；同時幫助當地政府做好醫療廢水及隔離點廢水的處理工作，有效阻斷病毒通過污水等廢棄物媒介進行二次傳播。



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

確保包容和公平的優質教育，
讓全民終身享有學習機會

4.4

By 2030, to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

到二零三零年，大幅增加掌握就業、體面工作和創業所需相關技能，包括技術性和職業性技能的青年和成年人數。

In order to promote environmental education, the Group continuously opens more environmental protection facilities to the public. During the Reporting Period, the Group received 4,832 visitors in 185 batches in aggregate.

為了推動環保教育，本集團不斷加強環保設施公眾開放。於報告期內，本集團的項目共接待185批次，合計4,832人次。

In view of the normalised policy adjustment for the prevention and control of the COVID-19 pandemic, the Group has adopted a more flexible and innovative approach, under the premise of ensuring safety, in opening up its environmental protection facilities for public visits and actively promoting environmental protection awareness and knowledge via offline and online platforms.

隨著新冠疫情防控常態化政策的調整，在確保安全的前提下，本集團圍繞環保設施公眾開放活動採取了更加靈活、創新的安排，積極透過「線下」、「在線」平台向民眾傳遞環保理念和環保知識。

Devoted to Achieving Sustainable Development Goals
致力實踐可持續發展目標

SDGs
可持續發展目標



Achieve gender equality and empower all women and girls

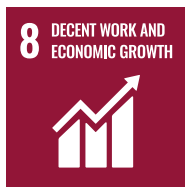
實現性別平等，增強所有婦女和女童的權能

5.1

To end all forms of discrimination against women and girls everywhere.
在全球消除對婦女和女童一切形式的歧視。

The Group's Contributions
本集團的貢獻

The Group ensures that its human resources management structure (including compensation, training opportunities and promotion opportunities) is not gender-biased, in order to achieve gender equality. 本集團力求人力資源管理架構（如薪酬水平，培訓機會及晉升機會）不受性別所限，實現男女性別平等。



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
促進持久、包容和可持續經濟增長，促進充分的生產性就業和人人獲得體面工作

8.2

To achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value-added and labour-intensive sectors. 通過多樣化經營、技術升級和創新，包括重點發展高附加值和勞動密集型行業，實現更高水平的經濟生產力。

Through investment, construction and operation of advanced waste water treatment projects, the Group facilitates the development of the downstream industries in sludge transportation and treatment, forming a comprehensive and sustainable water treatment industrial chain. 本集團透過投資、建造及運營先進的污水處理項目，帶動了下游污泥運輸及處置行業，形成完整的可持續水處理產業鏈。

Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標

SDGs 可持續發展目標



Reduce inequality within and among countries 減少國家內部和國家之間的不平等

10.2

By 2030, to empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

到二零三零年，增強所有人的權能，促進他們融入社會、經濟和政治生活，而不論其年齡、性別、殘疾與否、種族、民族、出身、宗教信仰、經濟地位或其他任何區別。

The Group's Contributions 本集團的貢獻

The Group pays special attention and adopts measures to ensure that its project operations do not affect the dignity, rights, livelihoods, or culture of indigenous peoples. Local ethnic minorities and the Han majority are respected and treated equally.

本集團特別關注及採取措施確保項目運營不會影響原住民族的尊嚴、權利、生計或文化。當地少數民族和漢族在工作上均受到同樣尊重和待遇。

Devoted to Achieving Sustainable Development Goals
致力實踐可持續發展目標

SDGs
可持續發展目標



Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
倡建和平、包容的社會以促進可持續發展，讓所有人都能訴諸司法，在各級建立有效、負責和包容的機構

16.2

End abuse, exploitation, trafficking and all forms of violence against and torture of children.

終結對兒童進行虐待、剝削、販賣以及一切形式的暴力和酷刑。

16.5

Substantially reduce corruption and bribery in all their forms.

大幅減少各種形式的貪污賄賂。

The Group's Contributions
本集團的貢獻

The Group regularly reviews its recruitment practices to ensure the compliance with applicable laws and regulations on the avoidance of child labour and forced labour, and requires suppliers to comply with such regulations, in order to avoid any forced labour and child labour and to safeguard the human rights of employees. 本集團定期檢討其招聘措施，以確保遵守有關避免童工及強制勞工的法律及規例，並要求供應商遵守相關規例，避免任何強迫勞動、使用童工等行為，維護員工的人權。

To enhance employees' awareness of anti-corruption, the Group regularly provides its employees with relevant training on corruption prevention, and incorporates corruption risks into its risk assessment and internal control mechanisms, thereby reducing the corruption risks of all employees and enhancing the Group's integrity culture.

為加強員工對反腐敗的警覺性，本集團定期為員工提供防止貪污相關的培訓，並把貪污風險納入風險評估及內部控制機制內，從而減低員工貪污風險，增進本集團的誠信廉潔文化。

Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標

The Group's Targets

本集團的目標

Review on 2022's Targets

二零二二年目標回顧

Aspect 範疇	2022 Target 二零二二年目標	Achieved 已達成
Discharge Compliance 排放合規	To maintain zero substantial non-compliance case in relation to effluent discharge 有關排放的嚴重違規個案維持於零宗	✓
Occupational Health and Safety 職業健康與安全	To maintain the rate of work-related injuries of employees below the level of 0.25 員工工傷率維持低於0.25水平	✓
Employment Practice 僱傭行為	To maintain zero case in relation to slavery, forced and bonded labour, child labour and abusive employment practices 有關任何奴役、強迫勞動、抵押勞工、使用童工及虐待行為維持於零宗	✓

Short and Medium/Long-Term Targets of the Group

本集團的短期及中長期目標

Aspect 範疇	Target 目標
GHG Management and Climate Change Mitigation 溫室氣體管理及氣候變化的應對	To establish and implement GHG management procedures, and prepare mitigation measures for potential climate change risks identified. 制定及實施溫室氣體管理程序及應對潛在氣候變化風險的緩解措施
Environmental Compliance 環境合規	To strictly comply with relevant local environmental regulations. 嚴格遵守項目所在地區的相關環境法規。
Water Resources Consumption and Waste Water Treatment 水資源消耗與污水處理	To provide high-quality water environment management services and minimise the environmental impacts arising from operations. Through the use of re-circulating water and reclaimed water, the water consumption for projects is reduced. 提供優質的水環境綜合治理服務，將運營的環境影響減至最低。並透過使用循環水及再用水，降低項目的水資源消耗。
Child Labour and Forced Labour 童工與強制勞工	To strictly prohibit any use of child labour and forced labour. 嚴格禁止使用任何童工與強迫勞動。
Occupational Health and Safety 職業健康與安全	To ensure that the occupational health and safety of all the Group's employees are well protected in accordance with relevant regulations. 確保本集團所有員工的職業健康和 safety 受到充分保障，並遵守有關法規。

Devoted to Achieving Sustainable Development Goals
致力實踐可持續發展目標

Aspect 範疇	Target 目標
Anti-Corruption 反貪腐	To enhance the awareness of the Group's employees and on-site third-party workers towards anti-corruption through training. 透過培訓以提高本集團員工及駐場第三方工人的反貪腐意識。
Waste Management 廢物管理	To minimise waste generation and maximise recycling rate. 減少廢物產生及增加回收率。
Disaster and Emergency Planning and Response 災難及應急預案規劃	To reduce the number of unplanned shutdowns at operating projects. 降低運營項目非計劃停運的次數。
Social Compliance 社會法規的遵循	To strictly comply with the relevant local social regulations and ensure that the Group is not involved in any misconducts, such as bribery, extortion and money laundering, etc. 嚴格遵守項目所在地區的相關社會法規，確保本集團沒有涉及賄賂、勒索或洗黑錢等不當行為。
Economic Performance 經濟績效	To create long-term and sustainable economic growth. 創造長遠及可持續的經濟增長。
Rights of the Indigenous Peoples 原住民權利	To protect the rights of indigenous peoples during the planning and operation of projects. 於項目規劃和運營過程中維護原住民的權利。
Anti-Competitive Behaviour 反競爭行為	To not be involved in any legal actions for anti-competitive behaviour, anti-trust and monopoly practices. 不參與任何反競爭行為、反托拉斯和壟斷行為的法律進程。
Energy Efficiency 能源效益	To continuously reduce the energy consumption of operating projects and actively explore various energy-efficient solutions. Electricity generated from renewable energy sources is used to reduce the consumption of fossil-based electricity during operation. 提升生產效率從以減低能源消耗，並透過採用廠內的可再生能源發電，減低運營過程中的化石燃料電量消耗。
Employee Training 員工培訓	To continuously increase resources on employee training, to provide employees with career development and diversified training opportunities throughout their careers. 持續加大培訓資源的投入，為員工提供職業發展及貫穿職業生涯的多元培訓機會。

Devoted to Achieving Sustainable Development Goals

致力實踐可持續發展目標

The Group has fully achieved its 2022 targets. Setting targets drives the continuous improvement of the Group in sustainable development of its business. The Group has set the following major sustainable development targets for 2023 and the long term.

此外，本集團已實現了其二零二二年目標。設立目標大大推動本集團持續改善業務的可持續發展。本集團設立了以下二零二三年與長遠的主要可持續發展目標。

Major Sustainable Development Targets

主要可持續發展目標

Aspect 範疇	2023 Target 二零二三年目標	Long-Term Target (2030) 長遠目標 (二零三零年)
Occupational Health and Safety 職業健康與安全	To maintain the rate of work-related injuries of employees below the level of 0.25 員工工傷率維持低於0.25水平	To maintain the rate of work-related injuries of employees at an average level of 0.25 or below throughout the period of 2020-2030 員工工傷率於二零二零至二零三零年間平均維持於0.25或以下水平
Discharge Compliance 排放合規	To maintain zero substantial noncompliance cases in relation to effluent discharge 有關排放的嚴重違規個案維持於零宗	To maintain zero substantial noncompliance cases in relation to effluent discharge consistently throughout the period of 2020-2030 有關排放的嚴重違規個案於二零二零至二零三零年間持續維持於零宗
Employment Practice 僱傭行為	To maintain zero cases in relation to slavery, forced and bonded labour, child labour and abusive employment practices 有關任何奴役、強迫勞動、抵押勞工、使用童工及虐待行為維持於零宗	To maintain zero cases in relation to slavery, forced and bonded labour, child labour and abusive employment practices consistently throughout the period of 2020-2030 有關任何奴役、強迫勞動、抵押勞工、使用童工及虐待行為於二零二零至二零三零年間持續維持於零宗

Major Recognitions, Awards and Memberships 主要嘉許、獎項及會籍

Received Numerous Awards in the Aspect of Corporate Social Responsibility

The year 2022 represents a fruitful year for Everbright Water. Thanks to its excellent operation, the Group was shortlisted as one of the “Top 10 Influential Enterprises in China’s Water Industry” for the fifth consecutive year and received the “ListCo Excellence Award” for the third consecutive year. Everbright Water Technology Development (Nanjing) Co., Ltd. participated in the “Key Technologies and Applications of Waste Water Toxicity Reduction and Deep Purification” research project as a key participant, which was awarded the first prize of “2021 Jiangsu Science and Technology Award” in January 2022. Everbright Water (Shenzhen) Co., Ltd. also participated in the “Innovation and Application of Key Technologies for Synergy in Resource Recovery of Autotrophic Desulfurisation and Carbon Reduction of Industrial Waste Water” research project as a key participant and won the first prize of “2021 Environmental Protection Science and Technology Award” in the same month. Xianyang Project was selected as “Beautiful China Specialised Practice Education Hub”; Shandong Zibo Waste Water Treatment Project (Plant 1) was successfully selected as one of “The Business Climate Action Cases 2022” jointly initiated by the Publicity and Education Centre of the Ministry of Ecology and Environment and China Champions for Climate Action.

於企業社會責任範疇屢獲殊榮

光大水務憑著其專業出色的水環境治理業務表現，以及在穩健企業管治和可持續發展方面的成果，在二零二二年榮膺多個獎項。本集團連續第五年入選「中國水業十大影響力企業」榜單，更連續第三年獲得「傑出上市公司大獎」。光大水務科技發展（南京）有限公司作為主要完成單位之一參與的《廢水毒性削減與深度淨化關鍵技術及應用》項目於二零二二年一月獲頒「2021年度江蘇省科學技術一等獎」，光大水務（深圳）有限公司作為主要完成單位之一參與的《工業廢水自養脫氮降碳資源回收協同增效關鍵技術創新與應用》項目亦於同月榮獲「2021年度環境保護科學技術獎一等獎」；咸陽項目獲選為「美麗中國專題實踐教育基地」；山東淄博污水處理項目（一廠）成功入選生態環境部宣傳教育中心和大道應對氣候變化促進中心聯合發起的《2022企業氣候行動案例集》。

Major Recognitions, Awards and Memberships 主要嘉許、獎項及會籍

Major Awards and Recognitions in 2022

二零二二年主要獎項及榮譽

Awards and Recognitions 獎項及榮譽	Awarding Organisation(s) 頒發機構
One of the Top 10 Influential Enterprises in China's Water Industry (for the fifth consecutive year) 「中國水業十大影響力企業」之一 (連續第五年)	E20 Environment Platform E20環境平台
ListCo Excellence Award 2022 (for the third consecutive year) 傑出上市公司大獎2022 (連續第三年)	The annual "ListCo Excellence Awards" by organisations including Hong Kong stock channel of <i>ifeng.com</i> and Hong Kong media " <i>am730</i> " 《鳳凰網港股》、香港媒體《am730》等機構聯合舉辦的「傑出上市公司大獎」年度評選
ASEAN Asset Class Publicly Listed Companies 東南亞國家聯盟 (「東盟」) 優質資產上市公司獎	2021 Association of Southeast Asian Nations ("ASEAN") Corporate Governance Scorecard 東盟資本市場論壇舉辦的「二零二一年東盟公司治理評估」
First prize of the 2021 Environmental Protection Science and Technology Award 二零二一年度環境保護科學技術獎一等獎	Environmental Protection Science and Technology Awards Committee 環境保護科學技術獎勵委員會
First prize of the 2021 Jiangsu Science and Technology Award 二零二一年度江蘇省科學技術獎一等獎	Jiangsu Provincial Department of Science and Technology 江蘇省科學技術廳
Shandong Province Quality Structural Engineering Project 山東省優質結構工程	Department of Housing and Urban-Rural Development of Shandong Province 山東省住房和城鄉建設廳

Major Recognitions, Awards and Memberships 主要嘉許、獎項及會籍

Major Associations Participated by Everbright Water

光大水務參與的主要協會

Major Associations Joined by Everbright Water 光大水務參與的主要協會	Highlighted Activities in 2022 二零二二年重點活動
E20 Environment Platform E20環境平台	Attended relevant meetings 參加會議
China Integrated Environmental Protection and Education Alliance 中國生態環境產教聯盟	Attended relevant meetings 參加會議
China Exploration and Design Association, Municipal Engineering Section 中國勘察設計協會市政工程設計分會	Attended relevant meetings 參加會議
Xuzhou Municipal Exploration and Design Association 徐州市勘察設計協會	Attended relevant meetings 參加會議
Jiangsu Provincial Municipal Engineering Association 江蘇省市政工程協會	Attended relevant meetings 參加會議
Jiangsu Provincial Exploration and Design Association 江蘇省勘察設計行業協會	Attended relevant meetings 參加會議
Jiangsu Provincial Association of Engineering Consultants 江蘇省工程諮詢協會	Attended relevant meetings 參加會議
Jiangsu Association of Landscape Architecture 江蘇省風景園林協會	Attended relevant meetings 參加會議
Xuzhou Municipal Civil Engineering Society 徐州市土木建築學會	Attended relevant meetings 參加會議
Xuzhou City Association of Enterprise Credit Management 徐州市企業信用管理協會	Through the “2021 City Contract-abiding and Credit-Reliable Enterprise” publicity work organised by the association 通過協會組織的「2021年度市級守合同重信用企業」公示工作
China Urban Water Supply Association 中國城鎮供水排水協會	Attended relevant meetings 參加會議

Major Recognitions, Awards and Memberships

主要嘉許、獎項及會籍

Major Associations Joined by Everbright Water 光大水務參與的主要協會

Shandong Provincial Urban Water Supply Association
山東省城鎮供排水協會

Shandong Provincial Urban Construction
Management Association
山東省城市建設管理協會

Highlighted Activities in 2022

二零二二年重點活動

Participated in the “Two Clearings and One Upgrading” seminar on urban drainage in Shandong Province on 30 June 2022. Participated in the 2022 executive council meeting on 14 October 2022.

於二零二二年六月三十日參加山東省城市排水「兩個清零、一個提標」研討會。於二零二二年十月十四日參加二零二二年常務理事會議。

Participated in the “2022 Selection of Advanced Groups and Individuals in the Urban Water Supply and Drainage Industry in Shandong Province”, recommending an advanced group and two employees run for the advanced group.

參與「二零二二年山東省城鎮供排水行業先進集體和個人評選」，推薦一個先進集體，兩名員工競選先進。

Participated in the “Shandong Province Urban Water Supply and Drainage Industry 2022 Excellent Engineering Project Case Selection” in May 2022; Dezhou Nanyunhe Waste Water Treatment Plant Phase II Expansion Project won the title of “Excellent Engineering Project”.

二零二二年五月參與「山東省城鎮供水排水行業2022年優秀工程項目案例評選」；德州市南運河污水處理廠二期擴建工程獲得「優秀工程項目」稱號。

Participated in the “Shandong Province 2nd Wepag Cup Urban Water Industry Outstanding Person Selection” in July. Participated in the “2022 Shandong Province Urban Water Supply and Drainage Industry Advanced Collective and Individual Selection” in November.

二零二二年七月參與「山東省第二屆威派格杯城鎮水務行業優秀人物評選」。二零二二年十一月參與「2022年山東省城鎮供排水行業先進集體和個人評選」。

Major Recognitions, Awards and Memberships 主要嘉許、獎項及會籍

Major Associations Joined by Everbright Water 光大水務參與的主要協會	Highlighted Activities in 2022 二零二二年重點活動
Ji'nan Municipal Association for Science and Technology 濟南市科學技術協會	Attended relevant meetings 參加會議
Ji'nan Municipal Urban Water Supply and Drain Association 濟南市城鎮供水排水協會	Participated in the fourth meeting of the fourth council and the first member (representative) meeting of the fourth meeting on 5 March 2022. 二零二二年三月五日參加第四屆四次理事會暨第四屆一次會員(代表)大會。
Shandong Provincial Urban Water Association 山東省供水排水協會	Attended relevant meetings 參加會議
Shandong Provincial Water Association 山東省水協	Attended relevant meetings 參加會議
Qingdao Municipal Water Supply, Conservation and Drainage 青島市城鎮供水節水排水協會	Attended relevant meetings 參加會議
Shandong Provincial Urban Water Supply Association 山東省城鎮供排水協會	Participated in the meeting according to the notice, and received a notification document about the advanced collectives and individuals in the urban water supply and drainage industry in Shandong Province in 2021. Among them, Binzhou Company won the title of "Advanced Collective in Urban Drainage Work in Shandong Province in 2021", and employees Li Chuanyong and Zhang Sen were awarded the title of "Advanced Individual of Urban Drainage Work in Shandong Province in 2021". 按通知參會，並收到關於2021年山東省城鎮供排水行業先進集體和個人的通報文件，其中，濱州公司獲得《2021年山東省城鎮排水工作先進集體》稱號，員工李傳勇、張森獲得《2021年山東省城鎮排水工作先進個人》稱號。

Major Recognitions, Awards and Memberships**主要嘉許、獎項及會籍**

Major Associations Joined by Everbright Water 光大水務參與的主要協會	Highlighted Activities in 2022 二零二二年重點活動
Panjin Municipal Association of Environmental Protection Industry 盤錦市環境保護產業協會	Attended relevant meetings 參加會議
Dalian Environmental Protection Volunteers Association 大連市環保志願者協會	Attended relevant meetings 參加會議
Panjin Toxic and Chemicals Association 盤錦市易制毒化學品行業自律協會	Attended relevant meetings 參加會議
Jiangyin Municipal Society for Environmental Sciences 江陰市環境科學學會	Attended relevant meetings 參加會議
Jiangyin Municipal Waste Water Treatment Industry Association 江陰市污水處理行業分會	Attended relevant meetings 參加會議
Explosive Chemicals Association 易制爆化學品協會	Attended relevant meetings 參加會議
Kunshan Environmental Protection Industry Association 昆山環保產業協會	Attended relevant meetings 參加會議
Kunshan Water Society 昆山水務學會	Attended relevant meetings 參加會議
Kunshan Finance and Accounting Society 昆山財政會計學會	Attended relevant meetings 參加會議

Total economic contributions to the major associations in 2022 amounted to RMB302,487.

二零二二年對各協會的總經濟貢獻為302,487元人民幣。

Verification Statements
審核聲明**VERIFICATION STATEMENT****Scope and Objective**

Hong Kong Quality Assurance Agency ("HKQAA") was commissioned by China Everbright Water Limited ("Everbright Water") to undertake an independent verification for the Sustainability Report 2022 (hereinafter called the "Report"). The Report stated the sustainability performance of Everbright Water in the period of 1 January, 2022 to 31 December, 2022.

The Report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021, Rule 13.91 and Appendix 27 Environmental, Social and Governance Reporting Guide ("ESG Reporting Guide") of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "SEHK Listing Rules").

Level of Assurance and Methodology

The process applied in this verification was based on the International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. Our evidence gathering process was designed to obtain a reasonable level of assurance as set out in the standard for the purpose of devising the verification conclusion. The extent of this verification process undertaken covered the criteria set out in the GRI Standards:

HKQAA's verification process included verifying the mechanisms for collecting, calculating and reporting the sustainability performance information, reviewing relevant documented information, interviewing responsible personnel with accountability for preparing the Report and verifying selected representative samples of data and information. Raw data and supporting evidence of the selected samples were also thoroughly examined during the verification process.

Independence

Everbright Water is responsible for the collection and preparation of the information presented. HKQAA did not involve in the collection and calculation of data or the compilation of the reporting contents. Our verification activities were entirely independent and there was no relationship between HKQAA and Everbright Water that would affect the impartiality of the verification.

Conclusion

Based on the verification results and in accordance with the verification procedures undertaken, HKQAA has obtained reasonable assurance and is in the opinion that:

- The Report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021 and the SEHK Listing Rules (Rule 13.91 and Appendix 27 the ESG Reporting Guide);
- The Report illustrates the sustainability performance of Everbright Water, covering all material aspects, in a balanced, comparable, clear and timely manner; and
- The data and information disclosed in the Report are accurate, reliable and complete.

Nothing has come to HKQAA's attention that the selected sustainability performance information and data contained in the Report has not been prepared and presented fairly and honestly, in all material aspects, in accordance with the verification criteria. In conclusion, the Report reflects truthfully of Everbright Water's sustainability performance that is commensurate with the sustainability context and materiality of the company.

Signed on behalf of Hong Kong Quality Assurance Agency

Meico Cheong
Assistant Director, Innovation Business
20 March, 2023

Verification Statements

審核聲明



核實聲明

範圍及目的

香港品質保證局已對中國光大水務有限公司（「光大水務」）二零二二年可持續發展報告（以下簡稱「報告」）的內容進行獨立驗證。該報告涵蓋光大水務在 2022 年 1 月 1 日至 2023 年 12 月 31 日期間，有關可持續發展方面工作的表現。

此核實聲明的目的是對報告所記載之內容提供合理保證。報告是根據全球報告倡議組織（GRI）標準 2021、香港聯合交易所有限公司證券上市規則（「聯交所上市規則」）第 13.91 條及附錄 27 所載的《環境、社會及管治報告指引》的要求編製。

保證程度和核實方法

此次驗證工作是依據 International Auditing and Assurance Standards Board（國際審計與核證準則委員會）發布的 International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information（國際核證聘用準則 3000（修訂版），歷史財務資料審計或審閱以外的核證聘用）執行。收集核實證據的過程是參考國際準則所訂立進行合理保證的原則而制定以確保能擬定核實結論。此外，核實的內容是按照 GRI 標準 2021、聯交所上市規則（第 13.91 條和附錄二十七《環境、社會及管治報告指引》）而定。

香港品質保證局的核實過程包括驗證了光大水務的可持續發展表現資料收集、計算和彙報的機制，檢閱有關文件資料，與負責編制報告的代表面談，選取具有代表性的數據和資料進行查核。相關原始數據和支持證據亦於核實過程中經過詳細審閱。

獨立性

光大水務負責收集和準備所有在報告內陳述的資料。香港品質保證局不涉及收集和計算此報告內的數據或參與編撰此報告。就提供此核實服務而言，香港品質保證局與光大水務之間並無任何會影響核實公正的關係，我們的核實過程是完全獨立的。

結論

基於是次的驗證結果，香港品質保證局對報告作出合理保證並總結：

- 報告是按照 GRI 標準 2021、聯交所上市規則（第 13.91 條和附錄二十七《環境、社會及管治報告指引》）編製而定；
- 報告平衡、具比較性、清晰、一致和適時地將重要的可持續發展表現範疇和議題作出闡述；及
- 報告內的數據和資料準確、可靠和完整。

根據驗證準則，香港品質保證局沒有發現在報告內闡述的可持續發展表現資訊和資料並非公平和如實地按照核實標準在主要範疇作出披露。總體而言，此報告能如實地反映光大水務的可持續發展表現並與其具體的可持續發展情況和重要性相稱。

香港品質保證局代表簽署

蔣齊仲
創新業務助理總監
2023 年 3 月 20 日



14842048-OTH

Verification Opinion

Scope and Objectives

Hong Kong Quality Assurance Agency (“HKQAA”) has been commissioned by China Everbright Water Limited (“CEWL”) to conduct an independent verification of the Greenhouse Gases (“GHG”) emissions inventory (“Emissions Inventory”) for the period 1st January 2022 to 31st December 2022. The aim of this verification is to provide a reasonable assurance on the data consolidated in the Emissions Inventory compiled by CEWL using the operational control approach against the requirements of ISO 14064-1:2018 ‘*Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*’.

Based on the preparation of the “*CEWL SR22 GHG Inventory*” by CEWL in accordance with the criteria of ISO 14064-1:2018, an opinion was concluded by the verification team from the verification activities, including:

- Offsite verification with the aid of Information Communication Technology (ICT) of the GHG emission data associated to mobile emissions, electricity consumption as well as GHG emissions from activities of water treatment facilities; and
- Desk-top review of documentation and supporting evidence.

Methodology

The verification was conducted in accordance with ISO 14064-3: 2019 ‘*Specification with guidance for the verification and validation of greenhouse gas statements*’. The process included the assessment of:

- reporting boundaries selected;
- quantification methodology and emission factors used;
- integrity of the historical activity data used;
- accuracy and completeness of the GHG calculations; and
- conformance with the requirements of the ISO 14064-1:2018.

Integrity and accuracy of the aggregated data was tested by tracing the sampled data to its sources. The underlying processes for data collection, aggregation, estimation, calculation and internal checking were reviewed and undergone reliability test. Materiality threshold of 5% was adopted for this verification. HKQAA verification team did not partake in the GHG data preparation process.

1

Remarks:
This verification opinion includes page <1> to page <5>

Verification Statements

審核聲明



香港品質保證局

14842048-OTH

Conclusion

Total GHG emissions and removals of China Everbright Water Limited in 2022:

2022 GHG Emissions and Removals	Tonnes (T) of CO ₂ equivalent
Category a): Direct GHG emissions (excluding anthropogenic biogenic GHG emissions)	5,100.8
Anthropogenic biogenic GHG emissions	30,389.2
Category a): Direct GHG removals (excluding anthropogenic biogenic GHG removals)	5,418.4
Anthropogenic biogenic GHG removals	107,902.7
Indirect GHG emissions	452,661.3
Category b): Imported Energy	425,933.0
Category c): Transportation	2,423.3
Category d): Products used	/
Category e): Use of products	/
Category f): Other sources	24,305.0
Total (Direct + Indirect Emissions excluding anthropogenic biogenic GHG emissions)	457,762.2
Total (Direct + Indirect Removals excluding anthropogenic biogenic GHG removals)	5,418.4

Signed on behalf of Hong Kong Quality Assurance Agency:

Lead Verifier:

Tommy Lo

Date of Issuance: 17 March 2023

Assistant Director, Innovation Business:

Meico Cheong

Date of issuance: 17 March 2023

Hong Kong Quality Assurance Agency
19/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Contact detail www.hkqaa.org

Remarks:

This verification opinion includes page <1> to page <5>



14842048-OTH

Verification Opinion (Continued)**Introduction:**

HKQAA has been commissioned by China Everbright Water Limited ("CEWL", address: 36/F., Far East Finance Centre, 16 Harcourt Road, Hong Kong) for the verification of its direct and indirect Greenhouse Gas emissions and removals in accordance with ISO14064-3: 2019 as provided by CEWL in its GHG Statement in form of "CEWL SR22 GHG Inventory" covering GHG emissions and removals of the reporting period 1st January 2022 to 31st December 2022.

Roles and responsibilities:

CEWL is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with the system, including the calculation and determination of GHG emissions and removals information, and the reported GHG emissions and removals. HKQAA verification team is responsible for providing an independent GHG verification opinion on the GHG Statement provided by CEWL for the reporting period.

HKQAA conducted a third-party independent verification of the provided GHG Statement against the requirements of ISO 14064-1:2018 from December 2022 to March 2023. The verification was based on the verification scope, objectives and criteria as agreed between CEWL and HKQAA.

Detail of the Scope:

- The organizational boundary was established following the operational approach.
- The reporting boundaries were established including the identification of direct and indirect GHG emissions and removals associated with the following CEWL's operations of various water facilities.
- Title or description activities: Verification of GHG Inventory 2022 for CEWL
- Location/boundary of the activities:
 - o Totally 117 wholly owned facilities (103 in operation stage and 14 in construction stage) for domestic and industrial wastewater treatment, reusable water treatment and river-basin ecological restoration etc. in China for over 99% of GHG emissions

3

Remarks:
This verification opinion includes page <1> to page <5>

Verification Statements

審核聲明



14842048-OTH

- Physical infrastructure, activities, technologies and processes of the organization:
 - o Stationary combustion sources such as fuel combustion for generator set and machinery equipment
 - o Mobile combustion sources such as plant vehicles and mobile machines
 - o Indirect energy emissions from purchased energy
 - o Anthropogenic biogenic emissions of methane emissions from treatment of wastewater
 - o Anthropogenic biogenic emissions of N₂O emissions from biological treatment of wastewater
 - o N₂O emissions in effluent discharged
 - o Contractor transportation of sludge generated from wastewater treatment facilities
 - o Air travel by employees
- GHG sources, sinks and/or reservoirs included: GHG sources as presented in the “CEWL SR22 GHG Inventory” of CEWL
- Types of GHGs included: CO₂, CH₄ and N₂O, where NF₃, SF₆, HFCs and PFCs are either not used by CEWL or not in significant amount.
- The data and information supporting the GHG Statement were hypothetical, projected and/or historical in nature.
- GWP adopted: 100-year global warming potentials (GWPs) identified in the IPCC’s Sixth Assessment Report.
- GHG information for the following period was verified: 1st January 2022 to 31st December 2022
- Intended user of the verification opinion: Stakeholders identified by CEWL



14842048-OTH

Conclusion:

CEWL provided the GHG Statement in form of “*CEWL SR22 GHG Inventory Revision 2*” based on the requirements of ISO14064-1:2018. The GHG information for the reporting period disclosing the total direct and indirect greenhouse gas emissions of 457,762.2 tonnes of CO₂ equivalent (excluding anthropogenic biogenic GHG emissions), and anthropogenic biogenic GHG emissions of 30,389.2 tonnes of CO₂ equivalent, direct greenhouse gas removals of 5,418.4 tonnes of CO₂ equivalent (excluding anthropogenic biogenic GHG removals), and anthropogenic biogenic GHG removals of 107,902.7 tonnes of CO₂ equivalent are verified by HKQAA to a reasonable level of assurance (within 5%), consistent with the agreed verification scope, objectives and criteria.

HKQAA adopted a risk-based approach for the verification. Our examination includes assessment of evidence relevant to the amounts and disclosures in relation to CEWL’s reported GHG emissions.

The verification team assessed the GHG Statement in form of “*CEWL SR22 GHG Inventory*” of CEWL including the GHG information system and reporting protocol. This assessment covered the collection of supporting evidence of the reported data and verified the consistency and appropriateness of the provided protocol reference.

Based on the verification process and procedures conducted, there is no evidence that the GHG Statement in form of “*CEWL SR22 GHG Inventory*” prepared by CEWL:

- is not materially correct and is not a fair representation of GHG data and information for the reporting period;
- has not been prepared in accordance with ISO 14064-1:2018 on GHG quantification, monitoring and reporting.

HKQAA shall be responsible, and shall remain authority to forthwith suspend or withdraw CEWL’s verification opinion under the scheme or reduce the scope of such verification or terminate the contract if CEWL is unable to comply with the requirements of the “Terms and Conditions”.

Key Statistics 主要數據

Economic Performance

經濟表現

		2022	2021	2020
		HK\$'000	HK\$'000	HK\$'000
		港元千元	港元千元	港元千元
Direct Economic Value Generated	產生的直接經濟價值			
Revenue	收入	6,727,967	6,912,371	5,663,292
Other income and gains/(losses), net	其他收入及收益／(虧損)淨額	53,793	(22,492)	53,068
Share of profits and losses of associates	所佔聯營公司盈利及虧損	11,226	(6,758)	4,224
Economic Value Distributed	分配的經濟價值			
Staff costs	員工開支	474,098	519,429	324,940
Other costs ⁽¹⁾	其他成本 ⁽¹⁾	4,166,180	4,140,444	3,477,880
Net finance costs	財務費用淨額	516,313	413,303	332,988
Dividends	股息	303,221	360,119	280,230
			(Restated 經重列)	(Restated 經重列)
Taxes ⁽²⁾	稅項 ⁽²⁾	240,314	203,264	207,289
Profit attributed to holders of perpetual capital instruments	永續資本工具持有人	14,334	–	–
Profit attributed to non-controlling interests	非控股權益應佔盈利	42,010	82,657	62,093
Charitable donations	慈善捐款	487	12	2,192
Economic Value Retained	留存的經濟價值			
Retained for Everbright Water's sustainable operation and development	留存作光大水務的可持續運營和發展	1,036,029	1,163,893	1,032,972
			(Restated 經重列)	(Restated 經重列)

Key Statistics
主要數據Operational Performance ⁽³⁾運營表現⁽³⁾

		Unit 單位	2022	2021	2020
Total Designed Capacity	總設計規模				
Waste water treatment	污水處理	m ³ /day 立方米/日	6,098,100	5,960,600	5,471,600
Reusable water	中水回用	m ³ /day 立方米/日	300,600	250,600	196,600
Water supply	供水	m ³ /day 立方米/日	250,000	250,000	250,000
Raw water protection	原水保護	m ³ /day 立方米/日	600,000	600,000	600,000
Business Performance	業務表現				
Waste water treatment	污水處理	m ³ 立方米	1,770,260,000	1,698,700,000	1,559,100,000
COD reduction	COD減排	tonne 噸	433,453	417,371	339,000
Reusable water	中水回用	m ³ 立方米	43,629,000	28,530,000	24,330,000
Screenings removed from waste water	從污水中移除的隔濾物量	tonne 噸	10,931.16	12,394.86	11,310.81
Grits removed from waste water	從污水中移除的沙礫量	tonne 噸	7,759.34	10,363.42	9,996.67
Suspended solids (SS) removed from waste water	從污水中移除的懸浮固體量	tonne 噸	377,531.21	370,046.37	295,102.77
Biochemical oxygen demand (BOD) removed from waste water	從污水中移除的生化需氧量	tonne 噸	191,572.57	188,002.59	155,475.61
Total phosphorus (TP) removed from waste water	從污水中移除的總磷量	tonne 噸	6,491.05	6,906.07	6,693.41
Total nitrogen (TN) removed from waste water	從污水中移除的總氮量	tonne 噸	50,172.70	50,908.22	41,566.22
Ammoniacal nitrogen (NH ₃ -N) removed from waste water	從污水中移除的氨氮量	tonne 噸	50,128.67	50,592.79	43,647.17
GHG Emissions ^{(4),(5),(6)}	溫室氣體排放 ^{(4),(5),(6)}				
Scope 1 (Direct emissions)	範疇一 (直接排放)	tCO ₂ e 噸二氧化碳當量	35,489.99	43,188.72	27,215.63
Scope 2 (Energy indirect emissions)	範疇二 (能源引致的間接排放)	tCO ₂ e 噸二氧化碳當量	425,932.99	392,120.35	342,619.47
Scope 3 (Other indirect emissions)	範疇三 (其他間接排放)	tCO ₂ e 噸二氧化碳當量	26,728.35	25,119.95	33,300.68
Total GHG emissions	溫室氣體排放總量	tCO ₂ e 噸二氧化碳當量	488,151.33	460,429.01	403,135.78
GHG emission intensity	溫室氣體排放強度	kgCO ₂ e/m ³ of waste water treated 公斤二氧化碳當量/立方米 (污水處理)	0.28	0.27	0.26
GHG emissions offset	溫室氣體抵銷量	tCO ₂ e 噸二氧化碳當量	113,321.17	111,865.01	93,967.65
Remaining GHG emissions	剩餘溫室氣體排放量	tCO ₂ e 噸二氧化碳當量	374,830.16	348,564.00	309,168.13
Remaining GHG intensity	剩餘溫室氣體排放強度	kgCO ₂ e/m ³ of waste water treated 公斤二氧化碳當量/立方米 (污水處理)	0.21	0.21	0.20

Key Statistics

主要數據

		Unit 單位	2022	2021	2020
Energy Consumption ⁽⁷⁾		能源消耗⁽⁷⁾			
Non-renewable electricity	非再生能源電力	GJ 吉焦	2,542,609.77	2,290,657.61	1,993,845.90
Renewable electricity	再生能源電力	GJ 吉焦	25,417.24	41,224.17	35,487.07
Natural gas	天然氣	GJ 吉焦	0	0	0
Diesel	柴油	GJ 吉焦	40,709.86	1,151.60	1,682.75
Gasoline	汽油	GJ 吉焦	15,842.37	39,193.70	8,027.17
Total energy consumed	總能源消耗	GJ 吉焦	2,624,579.23	2,372,227.09	2,039,042.89
Energy intensity	能源強度	kJ/m ³ of waste water treated 千焦/立方米 (污水處理)	1,482.65	1,396.49	1,307.83
Emission factor of GHG emissions due to electricity used for treating waste water	用於處理污水的電力消耗導 致的溫室氣體排放的排放 因子	kgCO ₂ e/m ³ of waste water treated 公斤二氧化碳當量 /立方米 (污水處理)	0.23	0.23	0.21
Water Consumption [#]		耗水[#]			
Total freshwater consumed	總淡水消耗量	m ³ 立方米	1,527,682	Data not available 沒有相關數據	Data not available 沒有相關數據
Freshwater intensity	淡水消耗強度	m ³ /1,000 m ³ of waste water treated 立方米/千立方米 (污水處理)	0.86	Data not available 沒有相關數據	Data not available 沒有相關數據

Note:

Total freshwater consumption and intensity have been revised to apply only to the Group's municipal waste water treatment projects, industrial waste water treatment projects, leachate treatment projects and sludge treatment and disposal projects. This is with due consideration that other projects' key objectives are to purify freshwater for use by the public/clients, therefore the freshwater withdrawn is not considered as consumed.

附註：

淡水總消耗量及強度經修訂後僅適用於本集團的市政污水處理項目、工業廢水處理項目、滲濾液處理項目及污泥處理處置項目。這是考慮到其他項目的主要目標是淨化淡水供公眾/客戶使用，因此，所抽取的淡水不被視為被消耗。

Key Statistics
主要數據

Key Materials Used	所用主要物料	Unit 單位	2022	2021	2020
Function 用途	Material 物料				
Absorbent 吸附劑	Pulverised coal ash 粉煤灰	Tonne 噸	0	0	0
Biological treatment 生物處理	Magnetic powder 磁粉	Tonne 噸	190.56	369.94	19.29
Carbon source 碳源	Manure 糞土		0	0	0
	Refined methanol 精甲醇		917.74	897.14	782.15
	Sodium acetate 乙酸鈉		84,641.95	145,170.99	85,920.60
	Waste methanol 廢甲醇		0	0	0
	Glucose 葡萄糖	Tonne 噸	30,145.87	29,343.69	25,986.83
	Activated carbon 活性碳		90.80	97.57	0
	Compound carbon source 複合碳源		75,504.66	12,167.54	1,141.71
	Xylose 木糖		0	3,629.23	3,412.18
	Brown sugar 紅糖		0	0	18.00
Chemical oxidiser 化學氧化劑	Hydrogen peroxide 雙氧水		7,995.66	11,184.42	12,446.13
	Calcium hypochlorite 次氯酸鈣	Tonne 噸	0	2,652.77	3,074.47
	Liquid oxygen 液氧		16,627.21	19,393.75	5,868.27
Coagulant & flocculant 凝結劑及絮凝劑	Ferrous sulphate 硫酸亞鐵		10,926.50	14,520.15	18,170.36
	Iron (III) chloride 三氯化鐵		26,823.50	66,558.95	49,577.99
	PAFC 聚合氯化鋁鐵		13,076.23	12,569.72	15,072.31
	PFC 聚合氯化鐵		61,928.44	10,381.51	5,060.43
	PFS 聚合硫酸鐵		17,809.35	16,735.16	23,500.69
	Flocculant 絮凝劑		2,085.78	1,368.95	957.80
	PAC 聚合氯化鋁		39,315.01	54,342.72	32,408.49
	Iron (II) chloride 改性氯化亞鐵		2,386.89	1,324.39	758.09
	Aluminium sulfate 硫酸鋁		4,120.27	Data not available 沒有相關數據	Data not available 沒有相關數據

Key Statistics

主要數據

		Unit	2022	2021	2020
Key Materials Used	所用主要物料	單位			
Function	Material				
用途	物料				
Disinfectant 消毒劑	Hypochlorous acid 次氯酸		0	0	0
	Sodium hypochlorite 次氯酸鈉		26,756.56	26,257.42	18,757.97
	Liquid chlorine 液氯		0	0	137.07
	Sodium chlorate 氯酸鈉		0	0	0
	Disinfectant 消毒劑	Tonne 噸	24.64	25.90	0
	Non-oxidising biocide 非氧化殺菌劑		0	0	1.36
	Sodium dodecyl benzene sulphonate 十二烷基苯磺酸		0.03	0.09	0.14
	EDTA 乙二胺四乙酸		47.05	0	1.68
	pH adjustment 酸鹼調整	Citric acid 檸檬酸		101.12	85.98
Sodium carbonate 碳酸鈉			229.95	0	462.05
Sodium bicarbonate 碳酸氫鈉			0	0	0
Sodium phosphate 磷酸鈉			0	0	0
Sulphuric acid 硫酸		Tonne 噸	132.71	669.89	894.83
Lime 石灰			25,937.50	25,226.86	16,667.8
Sodium hydroxide 氫氧化鈉			3,139.00	6,996.87	5,125.34
Hydrochloric acid 鹽酸			196.24	182.96	203.28
Sodium tripolyphosphate 三聚磷酸鈉			0.20	71.84	3
Caustic soda 液碱			245.65	465.29	2.14
Others 其他		Tonne 噸	274.34	2,489.22	9,278.84
Non-hazardous Wastes Generated		所產生的無害廢棄物			
Sludge generated from waste water treatment projects	污水處理項目所產生的污泥	Tonne 噸	1,039,832.31	1,068,207.02	1,169,196.41
Intensity	污泥產生強度	Tonne/1,000 m ³ of waste water treated 噸/千立方米 (污水處理)	0.59	0.63	0.75
General wastes generated from office	辦公室一般廢棄物產生量	Tonne 噸	335.99	1,362.19	857.55
Total amount of non-hazardous wastes generated	無害廢棄物產生總量	Tonne 噸	1,040,168.30	1,069,291.09	1,170,053.96

Key Statistics
主要數據

Water Withdrawal, Water Discharge and Water Consumption in 2022

二零二二年取水量、排水量及耗水量

GRI 303-3

GRI 303-4

GRI 303-5

Water Withdrawal 取水量		All Areas 所有地區	Areas with Water Stress 具水資源壓力的地區
Water withdrawal by source (m ³) 依來源劃分取水量 (立方米)	Surface water 地表水		
	≤1,000 mg/L Total Dissolved solids ≤1,000毫克/升總溶解固體	108,000,887	108,000,887
	>1,000 mg/L Total Dissolved solids >1,000毫克/升總溶解固體	0	0
	Groundwater 地下水		
	≤1,000 mg/L Total Dissolved solids ≤1,000毫克/升總溶解固體	125,633	99,633
	>1,000 mg/L Total Dissolved solids >1,000毫克/升總溶解固體	0	0
	Seawater 海水		
	≤1,000 mg/L Total Dissolved solids ≤1,000毫克/升總溶解固體	0	0
	>1,000 mg/L Total Dissolved solids >1,000毫克/升總溶解固體	0	0
	Produced water 產出水		
	≤1,000 mg/L Total Dissolved solids ≤1,000毫克/升總溶解固體	30,513,195	20,733,422
	>1,000 mg/L Total Dissolved solids >1,000毫克/升總溶解固體	0	0
	Third-party water 第三方的水		
	≤1,000 mg/L Total Dissolved solids ≤1,000毫克/升總溶解固體	1,784,142,069	1,473,787,480
	>1,000 mg/L Total Dissolved solids >1,000毫克/升總溶解固體	0	0
Total third-party water withdrawal by withdrawal source 依取水來源劃分第三方的總取水量			
Surface water 地表水	195,801	157,348	
Groundwater 地下水	33,928	33,928	
Seawater 海水	0	0	
Produced water 產出水	1,783,912,340	1,473,596,204	
Total water withdrawal (m³) 總取水量 (立方米)	Surface water (total) + groundwater (total) + seawater (total) + produced water (total) + third-party water (total) 地表水 (總量) + 地下水 (總量) + 海水 (總量) + 產出水 (總量) + 第三方的水 (總量)	1,922,781,784	1,602,621,422

Key Statistics

主要數據

Water Withdrawal, Water Discharge and Water Consumption in 2022

二零二二年取水量、排水量及耗水量

GRI 303-3

GRI 303-4

GRI 303-5

Water Discharge 排水量		All Areas 所有地區	Areas with Water Stress 具水資源壓力的地區
Water discharge by destination (m ³) 依終點劃分排水量 (立方米)	Surface water 地表水	1,422,712,802	1,159,124,289
	Groundwater 地下水	26,000	0
	Seawater 海水	195,283,183	187,601,744
	Third-party water (Total) 第三方的水 (總量)	196,961,237	196,959,277
	Third-party water sent for use to other organisations 供其他組織使用的第三方的水	114,002,167	114,002,167
Total water discharge (m³) 總排水量 (立方米)	Surface water + groundwater + seawater + third-party water (total) 地表水+地下水+海水+第三方的水 (總量)	1,814,983,222	1,543,685,310
Water discharge by freshwater and other water (m ³) 依總溶解固體濃度劃分之排水量 (立方米)	Freshwater (≤1,000 mg/L Total Dissolved Solids) ≤1,000毫克/升總溶解固體	1,814,983,222	1,543,685,310
	Other water (>1,000 mg/L Total Dissolved Solids) >1,000毫克/升總溶解固體	0	0
Water Consumption 耗水量			
Total water consumption (m ³) 總耗水量 (立方米)*		107,798,563	58,936,113

Note:

* The total water consumption is calculated based on GRI 303 standard:

$$\text{Total water consumption} = \text{Total water withdrawal} - \text{Total water discharge}$$

The total water withdrawal includes waste water received from third parties for treatment in the Group's projects.

附註：

* 總耗水量按照GRI 303準則計算：

$$\text{總耗水量} = \text{總取水量} - \text{總排水量}$$

總取水量包含第三方排入本集團項目作處理的污水。

Key Statistics
主要數據

Waste Generation, Disposal and Recycling in 2022

二零二二年廢棄物產生、處置量和回收量

GRI 306-3

GRI 306-4

GRI 306-5

Waste Generation 廢棄物產生		Unit 單位	Waste Generation 廢棄物產生量	Waste Disposal 廢棄物處置量	Waste Recycling 廢棄物回收量
Office and Domestic Waste	辦公及生活廢棄物類別				
A. Waste paper (e.g. newspapers and periodicals, office paper, cardboard)	A. 廢紙 (如報紙書刊、辦公室用紙、紙皮等)		31.50	27.12	4.38
B. Metals (e.g. iron/aluminium cans, food containers)	B. 金屬 (如鐵/鋁罐、食品容器)		54.11	37.60	16.51
C. Plastics (e.g. water bottles, beverage bottles, personal care bottles)	C. 塑料 (如瓶裝水、飲品塑料瓶、個人護理用品瓶等)		8.30	4.79	3.52
D. Glass (e.g. beverage bottles, cooking oil/condiment bottles, etc.)	D. 玻璃 (如飲品玻璃瓶、食油/調味醬料玻璃瓶等)		10.38	5.79	4.59
E. Electrical appliances (e.g. phones, computers, printers, air conditioners, washing machines, TVs)	E. 電器 (如電話、電腦、打印機、冷氣機、洗衣機、電視機等)	Tonne 噸	2.14	1.05	1.09
F. Batteries (including individual batteries and batteries attached to electrical appliances)	F. 充電電池 (包括一般獨立充電電池及電器附設充電電池)		2.93	0.22	2.71
G. Kitchen waste	G. 廚餘		81.89	68.31	13.58
H. Used clothing (clothing, accessories, textiles)	H. 舊衣物 (衣服、飾物、紡織物)		3.41	1.77	1.64
I. Others	I. 其他		141.33	141.15	0.18
Sludge	污泥	Unit 單位	Waste Generation 廢棄物產生量	Waste Disposal 廢棄物處置量	Waste Recycling 廢棄物回收量
A. Hazardous waste	A. 有害廢棄物	Tonne 噸	174.94	174.94	0
B. Non-hazardous waste	B. 無害廢棄物		1,039,832.31	499,932.94	539,899.36
Other Waste	其他廢棄物	Unit 單位	Waste Generation 廢棄物產生量	Waste Disposal 廢棄物處置量	Waste Recycling 廢棄物回收量
Hazardous waste (such as waste acid, waste alkali, waste organic solvent, waste liquid, waste reagent, waste engine oil, etc.)	有害廢棄物 (例如廢酸、廢鹼、廢有機溶劑、廢液、廢試劑、廢機油等)	Tonne 噸	266.18	211.73	54.45
Total waste	廢棄物總量	Tonne 噸	1,040,609.42	500,607.42	540,002.00

Key Statistics

主要數據

Waste Treated by Recycling Operations

按回收作業從處置中移轉的廢棄物

		Unit 單位	On-site 現場	Off-site 離場	Total 總量
Hazardous Wastes	有害廢棄物				
Prepared for recycling	再使用準備		0	0	0
Recycling	再生利用		0	54.45	54.45
Other recycling operations	其他回收作業		0	0	0
Total	總量		0	54.45	54.45
Non-hazardous Wastes	非有害廢棄物	Tonne 噸			
Prepared for recycling	再使用準備		0	1,471.64	1,471.64
Recycling	再生利用		5.08	1,806.25	1,811.33
Other recycling operations	其他回收作業		0	536,664.58	536,664.58
Total	總量		5.08	539,942.47	539,947.55
Prevention of Waste Disposal	避免廢棄物處置				
Prevention of waste disposal	避免廢棄物處置				540,002.00

Waste Disposed by Disposal Operations

按處置作業直接處置的廢棄物

		Unit 單位	On-site 現場	Off-site 離場	Total 總量
Hazardous Wastes	有害廢棄物				
Incineration (including energy recovery)	焚化 (含能源回收)		0	3.90	3.90
Incineration (excluding energy recovery)	焚化 (不含能源回收)		0	325.82	325.82
Landfill	填埋		0	0	0
Other disposal operations	其他處置作業		0	56.96	56.96
Total	總量	Tonne 噸	0	386.67	386.67
Non-hazardous Wastes	非有害廢棄物				
Incineration (including energy recovery)	焚化 (含能源回收)		0	264,994.95	264,994.95
Incineration (excluding energy recovery)	焚化 (不含能源回收)		0	125,897.17	125,897.17
Landfill	填埋		0	80,483.04	80,483.04
Other disposal operations	其他處置作業		54.85	28,790.73	28,845.59
Total	總量		54.85	500,165.89	500,220.75

Key Statistics
主要數據Social Performance⁽³⁾社會表現⁽³⁾Employee Profile⁽⁸⁾員工概況⁽⁸⁾

		2022	2021	2020	
Total Number of Employees	員工總數	2,300	2,328	2,231	
By Gender	按性別劃分				
Male	男性	1,619	1,651	1,588	
Female	女性	681	677	643	
By Age	按年齡劃分				
30 and below	30歲及以下	433	458	463	
31-40	31-40歲	1,049	1,079	1,034	
41-50	41-50歲	581	567	520	
51 and above	51歲及以上	237	224	214	
By Employee Ranking	按員工職級劃分				
Senior management	高級管理人員	110	110	127	
Middle-level management	中層管理人員	460	423	347	
General and technical staff	一般及技術員工	1,730	1,795	1,757	
By Geographical Region	按地區劃分				
Hong Kong	香港	8	6	6	
Singapore	新加坡	3	4	4	
Mainland China	中國內地	2,289	2,318	2,221	
Including: Local employees ⁽⁹⁾	其中：本地員工 ⁽⁹⁾	2,070	2,079	1,982	
Non-local employees ⁽⁹⁾	外地員工 ⁽⁹⁾	230	249	249	
By Ethnicity	按民族劃分				
Han	漢族	2,223	2,248	2,162	
Ethnic minorities	少數族裔	77	80	69	
By Employment Contract	按合約類別劃分				
Permanent Contract	長期合約	Male	867	826	855
		Male			
		Female	328	335	363
		Female			
		Mainland China	1,184	1,151	1,003
		中國內地			
Hong Kong	香港				
Singapore	3	4	4		
新加坡					
Temporary/Fixed-term Contract	臨時／定期合約	Male	744	825	723
		Male			
		Female	361	342	290
		Female			
		Mainland China	1,105	1,167	1,218
		中國內地			
Hong Kong	香港				
Singapore	0	0	0		
新加坡					

Key Statistics 主要數據

New Employees and Employee Turnover

新聘及離職員工

		2022		2021		2020	
		Total Number 總人數	Percentage of employees in this category (%) 佔該類別員工 百分比(%)	Total Number 總人數	Percentage of employees in this category (%) 佔該類別員工 百分比(%)	Total Number 總人數	Percentage of employees in this category (%) 佔該類別員工 百分比(%)
Total Number of New Hires	員工總數	108	4.70	132	5.67	130	5.83
By Gender	按性別劃分						
Male	男性	63	3.89	80	4.85	87	5.48
Female	女性	45	6.61	52	7.68	43	6.69
By Age	按年齡劃分						
30 and below	30歲及以下	55	12.70	80	17.47	67	14.47
31-40	31-40歲	40	3.81	40	3.71	46	4.45
41-50	41-50歲	13	2.24	8	1.41	13	2.50
51 and above	51歲及以上	0	0	4	1.79	4	1.87
By Geographical Region	按地區劃分						
Hong Kong	香港	0	0	2	33.33	0	0.00
Singapore	新加坡	0	0	1	25.00	0	0.00
Mainland China	中國內地	108	4.72	129	5.57	130	5.83
Including: Local employees ⁽⁹⁾	其中：本地員工 ⁽⁹⁾	95	4.59	113	5.44	120	6.05
Non-local employees ⁽⁹⁾	外地員工 ⁽⁹⁾	13	5.65	19	7.63	10	4.02
Total Number of Employee Turnover (Resignation/Retirement)	員工流失總數 (離職/退休)	182	7.91	193	8.29	156	6.99
By Gender	按性別劃分						
Male	男性	116	7.16	138	8.36	118	7.43
Female	女性	66	9.69	55	8.12	38	5.91
By Age	按年齡劃分						
30 and below	30歲及以下	61	14.09	76	16.59	47	10.15
31-40	31-40歲	76	7.24	78	7.23	46	4.45
41-50	41-50歲	27	4.65	24	4.23	37	7.12
51 and above	51歲及以上	18	7.59	15	6.70	26	12.15
By Geographical Region	按地區劃分						
Hong Kong	香港	0	0	2	33.33	0	0.00
Singapore	新加坡	1	33.33	1	25.00	0	0.00
Mainland China	中國內地	181	7.91	190	8.20	156	6.99

Key Statistics
主要數據

Training and Development

培訓及發展

		2022	2021	2020
Total Training Hours	總培訓時數	139,296.40	245,454.00	91,461.60
Average Training Hours Per Employee	平均員工培訓時數	60.56	105.44	41.00
By Gender	按性別劃分			
Male	男性	59.66	114.74	42.04
Female	女性	62.71	82.74	38.41
By Employee Ranking	按員工職級劃分			
Senior management	高級管理人員	39.87	72.10	38.52
Middle-level management	中層管理人員	51.82	113.21	39.95
General and technical staff	一般及技術員工	64.20	105.65	41.38

Health and Safety

健康與安全

		2022	2021	2020
Employee	員工			
Number of work-related fatalities	因工死亡個案	0	0	0
Rate of work-related fatalities ⁽¹⁰⁾	因工死亡率 ⁽¹⁰⁾	0	0	0
Number of occupational disease cases	職業病個案	0	0	0
Number of high-consequence work-related injuries (excluding fatalities) ⁽¹¹⁾	嚴重工傷個案 (不包括死亡個案) ⁽¹¹⁾	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities) ⁽¹²⁾	嚴重工傷率 (不包括死亡個案) ⁽¹²⁾	0	0	0
Number of work-related injuries ⁽¹³⁾	工傷個案 ⁽¹³⁾	0	0	3
Rate of work-related injuries ⁽¹⁴⁾	工傷率 ⁽¹⁴⁾	0	0	0.14
Days of absence from work due to work-related injury	因工傷缺勤日數	0	0	207
Third Party Contractors and Subcontractors Working on-site	第三方承包商及分包商駐場工人			
Number of work-related fatalities	因工死亡個案	0	0	0
Rate of work-related fatalities ⁽¹⁰⁾	因工死亡率 ⁽¹⁰⁾	0	0	0
Number of occupational disease cases	職業病個案	0	0	0
Number of high-consequence work-related injuries (excluding fatalities) ⁽¹¹⁾	嚴重工傷個案 (不包括死亡個案) ⁽¹¹⁾	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities) ⁽¹²⁾	嚴重工傷率 (不包括死亡個案) ⁽¹²⁾	0	0	0
Number of work-related injuries ⁽¹³⁾	工傷個案 ⁽¹³⁾	0	0	0
Rate of work-related injuries ⁽¹⁴⁾	工傷率 ⁽¹⁴⁾	0	0	0
Days of absence from work due to work-related injury	因工傷缺勤日數	0	0	0

Key Statistics 主要數據

Remuneration

薪酬

		2022	2021	2020
Annual Total Remuneration and Ratio Figures 年度總薪酬及比例數據				
Total remuneration of the highest-paid individual (HK\$)	最高薪人士的薪酬總額 (港元)	3,395,000	4,908,978	3,404,560
The median of the total remuneration of all employees (excluding the highest-paid individual) (HK\$)	全體員工薪酬總額的中位數 (不包括最高薪人士) (港元)	97,762	103,269	88,173
The ratio of the total remuneration of the highest-paid individual to the median of the total remuneration of all employees (excluding the highest-paid individual)	最高薪人士的薪酬總額與全體員工薪酬總額的中位數的比例	34.73	47.54	38.61
Ratio of the annual percentage increase in total remuneration of the highest-paid individual to the median percentage increase in annual total remuneration of all employees (excluding the highest-paid individual)	最高薪人士薪酬總額的年度百分比增長與全體員工 (不包括最高薪人士) 薪酬總額中位數的年度百分比增長的比例	5.78	2.58	-1.70
The Average Remuneration by Employee Ranking (HK\$) 各級員工職級的平均薪酬 (港元)				
Senior management (male)	高級管理人員 (男)	513,316	578,346	478,354
Senior management (female)	高級管理人員 (女)	279,463	425,776	335,926
Middle-level management (male)	中層管理人員 (男)	212,939	238,567	183,730
Middle-level management (female)	中層管理人員 (女)	203,412	217,359	180,488
General and technical staff (male)	一般及技術員工 (男)	118,278	114,777	93,802
General and technical staff (female)	一般及技術員工 (女)	103,620	104,199	84,239

Notes:

- (1) Represents other costs but excludes depreciation, amortisation and charitable donations for the year.
- (2) Represents current income tax but excludes deferred tax for the year.
- (3) Due to rounding, there may be a slight discrepancy between the items of the statistics table and the relevant analysed data as shown in other chapters of this Report.
- (4) The calculation of scope 1 emissions covers all of the operating waste water treatment projects' fugitive methane emissions, nitrous oxide emissions from biological treatment process and direct emissions released from the direct use of fuel.

The calculation of scope 2 emissions includes the indirect emissions from purchased electricity consumption. The calculation boundary of scope 2 emissions covers all waste water treatment projects, reusable water projects, waste water source heat pump projects, sludge treatment and disposal projects, water supply projects, leachate treatment project and water environment management projects that were under construction and operation.

附註：

- (1) 代表該年度的其他成本，但不包括該年度的折舊、攤銷及慈善捐款。
- (2) 代表該年度所得稅，但不包括該年度的遞延稅項。
- (3) 由於捨入關係，數據表內個別項目的數字經分析計算後可能與本報告其他章節內的相關數據略有出入。
- (4) 範疇一的計算包括所有運營中的污水處理項目的無組織甲烷排放、生物處理過程中的氧化亞氮排放及經直接使用燃料而產生的直接排放。

範疇二的計算為使用外購電力而產生的間接排放。範疇二的計算邊界包括所有在建與運營中的污水處理、中水回用、污水源熱泵、污泥處理處置、供水、滲濾液處理項目與水環境治理項目。

Key Statistics 主要數據

- | | |
|---|--|
| <p>(5) The calculation of GHG emissions from operating waste water treatment projects is referenced to CDM methodology <i>AM0080: Mitigation of Greenhouse Gases Emissions with Treatment of Wastewater in Aerobic Wastewater Treatment Plants (Version 1.0)</i>.</p> | <p>(5) 運營污水處理項目的溫室氣體排放計算參照CDM方法《AM0080：透過在有氧污水處理廠處理污水減少溫室氣體排放（1.0版）》。</p> |
| <p>(6) The calculation of scope 3 emissions includes fuel consumption for the transportation of sludge by third parties, indirect emissions from air travel by employees and nitrous oxide released from effluent. GHG emissions from air travel are calculated by International Civil Aviation Organization Carbon Emissions Calculator.</p> | <p>(6) 範疇三的計算包括第三方運送污泥的燃料消耗、員工飛機差旅的間接排放及從出水中釋放的氧化亞氮。飛機差旅的溫室氣體排放以國際民航組織的碳排放計算器計算得出。</p> |
| <p>(7) Energy consumption is calculated based on the reference coefficients as stated in <i>China Energy Statistical Yearbook 2021</i>.</p> | <p>(7) 能源消耗量是根據《中國能源統計年鑒2021》的參考系數所計算。</p> |
| <p>(8) As at 31 December 2022.</p> | <p>(8) 截至二零二二年十二月三十一日。</p> |
| <p>(9) Employees hired from the same province in mainland China are regarded as local employees, whereas the employees hired from other provinces in mainland China are regarded as non-local employees.</p> | <p>(9) 在中國內地同省受聘的員工被視為本地員工，而在中國內地外省受聘的員工則被視為外地員工。</p> |
| <p>(10) Rate of work-related fatalities = (Total number of work-related fatalities/Total working hours) × 200,000</p> | <p>(10) 因工死亡率= (因工死亡個案總計／工作總時數) × 200,000</p> |
| <p>(11) High-consequence work-related injuries (excluding fatalities) refer to work-related injuries that result in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within 6 months.</p> | <p>(11) 嚴重工傷 (不包括死亡個案) 是指導致工作者無法或難於六個月內恢復至受傷前健康狀態的工傷。</p> |
| <p>(12) Rate of high-consequence work-related injuries (excluding fatalities) = (Total number of high-consequence work-related injuries (excluding fatalities)/Total working hours) × 200,000</p> | <p>(12) 嚴重工傷率 (不包括死亡個案) = (嚴重工傷個案總計 (不包括死亡個案) / 工作總時數) × 200,000</p> |
| <p>(13) Work-related injuries also include work-related fatalities and high-consequence work-related injuries.</p> | <p>(13) 工傷亦包含因工死亡及嚴重工傷。</p> |
| <p>(14) Rate of work-related injuries = (Total number of work-related injuries/Total working hours) × 200,000</p> | <p>(14) 工傷率 = (工傷個案總計 / 工作總時數) × 200,000</p> |

Appendix I – GRI Content Index

附錄I—GRI內容索引



CONTENT INDEX
ADVANCED SERVICE

2023

Everbright Water has reported in accordance with the GRI Standards for the period 1 January 2022 to 31 December 2022. There are no GRI sector standards currently applicable to the Group. For the Content Index – Advanced Service, GRI Services reviewed that the GRI content index is clearly presented, in a manner consistent with the GRI Standards, and that the references for all disclosures are aligned with the appropriate sections in the body of this Report. The service was performed on the English version of this Report.

光大水務已根據GRI準則針對二零二二年一月一日至二零二二年十二月三十一日期間進行報告。目前沒有適用於本集團的GRI行業準則。GRI於本次內容索引—進階服務(Content Index – Advanced Service)確認GRI內容索引表達清晰，並與GRI準則保持一致，所有披露的參考項亦與本報告相應的章節相符。本次服務按本報告的英文版本進行。

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考／說明	Page Number 頁數
GRI 1: Foundation 基礎 2021		
GRI 2: General Disclosures 一般揭露 2021		
The Organization and its Reporting Practices 組織及報導實務		
2-1	Organizational details 組織詳細資訊	About This Report 關於本報告 About Everbright Water 關於光大水務 Annual Report 2022 – Notes to the Financial Statements 二零二二年度報告-財務報表附註 China Everbright Water Limited is a company incorporated in Bermuda and listed on both SGX and SEHK. 中國光大水務有限公司是一間於百慕達成立及於新交所和聯交所上市的公司。
		10-23
		24-37
		–
2-2	Entities included in the organization's sustainability reporting 組織永續報導中包含的實體	About Everbright Water 關於光大水務 Annual Report 2022 – Notes to the Financial Statements 二零二二年度報告-財務報表附註
		24-37
		–
2-3	Reporting period, frequency and contact point 報導期間、頻率及聯絡人	About This Report 關於本報告
		10-23
2-4	Restatements of information 資訊重編	There are no restatements of information in this Report. 本報告不涉及資訊重編。
		–
2-5	External assurance 外部保證／確信	Verification Statements 審核聲明 The Board reviewed this Report and the external assurance report before publication. 董事會在發佈前審查本報告和外部鑑證報告。
		187-193

Appendix I – GRI Content Index
附錄I – GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數		
Governance 管治				
2-6	Activities, value chain and other business relationships 活動、價值鏈和其他商業關係	Message from CEO 總裁寄語 About Everbright Water 關於光大水務 Stakeholder Engagement 持份者參與 Annual Report 2022 – Chief Executive Officer’s Report, Directors’ Statement 二零二二年度報告–總裁報告，董事會聲明	5-9 24-37 152-167 –	
	2-7	Employees 員工	Stakeholder Engagement 持份者參與 Key Statistics 主要數據	152-167 194-207
		2-8	Workers who are not employees 非員工的工作者	Talent Development 人才發展 Key Statistics 主要數據
	Activities and Workers 活動及員工			
2-9	Governance structure and composition 治理結構及組成	Sustainability Governance 可持續發展管治 Annual Report 2022 – Corporate Governance Report 二零二二年度報告–企業管治報告 None of the members of the highest governance body comes from any underrepresented social group. 最高治理機構的成員都不是來自弱勢社會群體。	38-55 –	
		Annual Report 2022 – Corporate Governance Report 二零二二年度報告–企業管治報告	–	
2-10	Nomination and selection of the highest governance body 最高治理單位的提名與遴選	Annual Report 2022 – Corporate Governance Report 二零二二年度報告–企業管治報告	–	
2-11	Chair of the highest governance body 最高治理單位的主席	Annual Report 2022 – Corporate Governance Report 二零二二年度報告–企業管治報告	–	
2-12	Role of the highest governance body in overseeing the management of impacts 最高治理單位於監督衝擊管理的角色	Sustainability Governance 可持續發展管治 Annual Report 2022 – Corporate Governance Report 二零二二年度報告–企業管治報告	38-55 –	
		Annual Report 2022 – Corporate Governance Report 二零二二年度報告–企業管治報告	–	

Appendix I – GRI Content Index

附錄I—GRI內容索引

Disclosure Number 披露編號		Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數
2-13	Delegation of responsibility for managing impacts 衝擊管理的負責人	Sustainability Governance 可持續發展管治 Annual Report 2022 – Corporate Governance Report 二零二二年度報告-企業管治報告	38-55 –
2-14	Role of the highest governance body in sustainability reporting 最高治理單位於永續報導的角色	Message from CEO 總裁寄語 Sustainability Governance 可持續發展管治	5-9 38-55
2-15	Conflicts of interest 利益衝突	Sustainability Governance 可持續發展管治 Annual Report 2022 – Corporate Governance Report 二零二二年度報告-企業管治報告	38-55 –
2-16	Communication of critical concerns 溝通關鍵重大事件	Sustainability Governance 可持續發展管治 Annual Report 2022 – Corporate Governance Report – Risk Management and Internal Controls 二零二二年度報告-企業管治報告-風險管理和內部控制	38-55 –
2-17	Collective knowledge of the highest governance body 最高管治機構的共同知識	Annual Report 2022 – Corporate Governance Report 二零二二年度報告-企業管治報告	–
2-18	Evaluation of the performance of the highest governance body 最高治理單位的績效評估	Annual Report 2022 – Corporate Governance Report 二零二二年度報告-企業管治報告	–
2-19	Remuneration policies 薪酬政策	Annual Report 2022 – Corporate Governance Report – Remuneration Matters 二零二二年度報告-企業管治報告-薪酬事項與薪酬委員會 Remuneration Committee Terms of Reference 薪酬委員會職權範圍 There is no difference in retirement benefits between the Senior Management and other employees of the Group. 本集團高級管理層和其他員工的退休福利並無不一樣。	–
2-20	Process to determine remuneration 薪酬決定流程	Annual Report 2022 – Corporate Governance Report – Remuneration Matters and Remuneration Committee 二零二二年度報告-企業管治報告-薪酬事項與薪酬委員會 The Group seeks the opinions of the employee representative assembly in the formulation of remuneration policy. 本集團在制定薪酬政策時徵求職工代表大會的意見。	–

Appendix I – GRI Content Index
附錄I – GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數	
2-21	Annual total compensation ratio 年度總薪酬比率	Key Statistics 主要數據 The Group's main operation involves over 95% of employees originate from mainland China, therefore the Group does not disclose remuneration data by region. 本集團主營業務涉及95%以上的員工來自中國內地，因此本集團不披露按地區劃分的薪酬數據。	194-207
Strategy, Policies and Practices 策略、政策及常規			
2-22	Statement on sustainable development strategy 永續發展策略的聲明	Message from CEO 總裁寄語	5-9
2-23	Policy commitments 政策承諾	Sustainability Governance 可持續發展管治 Environmental Responsibility 環境責任 Talent Development 人才發展 Annual Report 2022 – Sustainability Report 二零二二年度報告-可持續發展報告 Everbright Water's ESG commitments are generally in line with relevant international initiatives including <i>UN Guiding Principles on Business and Human Rights</i> , <i>OECD Guidelines for Multinational Enterprises</i> , <i>OECD Due Diligence Guidance for Responsible Business Conduct</i> , and Principle 15 of the <i>Rio Declaration on Environment and Development</i> . 光大水務的ESG承諾與各相關國際倡議大概一致，包括《聯合國工商企業與人權指導原則》、《經濟合作暨發展組織跨國企業準則》、《經濟合作暨發展組織責任商業行為盡職調查指南》和《里約環境與發展宣言》第十五項原則。	38-55 100-129 130-151 –
2-24	Embedding policy commitments 納入政策承諾	Sustainability Governance 可持續發展管治	38-55

Appendix I – GRI Content Index

附錄I—GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考／說明	Page Number 頁數
2-25	Processes to remediate negative impacts 補救負面衝擊的程序 Sustainability Governance 可持續發展管治 During the period of publicity of procurement bidding results, the public/customer can complain through the procurement platform; During the publicity period before the promotion of employees, employees can make complaints through email; After feedback on the performance appraisal results, employees can appeal through the EHR system or paper documents; Employees who have suggestions and any comments on the Group can provide feedback through the suggestion box or Everbright E-letter public platform. 採購招標結果公示期間，公眾／客戶可通過採購平台進行投訴；在員工晉升前的公示期內，員工可以通過郵件進行投訴；績效考核結果反饋後，員工可通過EHR系統或紙質文件進行申訴；員工對本集團有任何建議和意見，可通過意見箱或光大E信公眾平台進行反饋。	38-55
2-26	Mechanisms for seeking advice and raising concerns 尋求建議和提出疑慮的機制 Sustainability Governance 可持續發展管治 Annual Report 2022 – Corporate Governance Report 二零二二年度報告—企業管治報告	38-55 –
2-27	Compliance with laws and regulations 法規遵循 Sustainability Governance 可持續發展管治 Appendix III – Compliance with Relevant Laws and Regulations that Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況 There were no fines or non-monetary sanctions for non-compliance during the Reporting Period. 報告期內沒有因違規而受到罰款或非金錢制裁。	38-55 228-232
2-28	Membership associations 公協會的會員資格 Major Recognitions, Awards and Memberships 主要嘉許、獎項及會籍	181-186
Stakeholder Engagement 持份者參與		
2-29	Approach to stakeholder engagement 利害關係人議合方針 About This Report – Communication with Stakeholders 關於本報告—與持份者溝通 Stakeholder Engagement 持份者參與	15-22 152-167
2-30	Collective bargaining agreements 團體協約 There are no collective bargaining agreements. The Group and the individual employees sign a separate labour contract to stipulate the rights and obligations of both parties, and if there is a change in the policy related to the vital interests of the employee, it will also be communicated through the employee representative assembly. 沒有集體談判協議。本集團與職工個人另行簽訂勞動合同，約定雙方的權利和義務，如涉及職工切身利益的政策發生變化，也將通過職工代表大會進行溝通。	–

Appendix I – GRI Content Index
附錄I – GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數
GRI 3: Material Topics 重大主題 2021		
3-1	Process to determine material topics 決定重大主題的流程	About This Report – Materiality Assessment 關於本報告-實質性評估 19-22
3-2	List of material topics 重大主題列表	About This Report – Materiality Assessment 關於本報告-實質性評估 19-22 In 2022, topics including Anti-Competitive Behaviour and Disaster and Emergency Planning and Response are newly considered to be material while topics including Environmental Compliance and Social Compliance are removed from consideration as their corresponding GRI Standards have been incorporated into GRI 2-27. 2022年，反競爭行為和災難及應急預案規劃與響應等主題被重新視為重要主題，而有關環境保護的法規遵循和社會經濟法規遵循等主題不再考慮，因為其相應的GRI標準已納入GRI 2-27。
Economic Performance 經濟績效		
GRI 3: Material Topics 重大主題 2021		
3-3	Management of material topics 重大主題管理	About This Report 關於本報告 10-23 Sustainability Governance 可持續發展管治 38-55
GRI 201: Economic Performance 經濟績效 2016		
201-1	Direct economic value generated and distributed 組織所產生及分配的直接經濟價值	Key Statistics 主要數據 194-207
201-2	Financial implications and other risks and opportunities due to climate change 氣候變遷所產生的財務影響及其它風險與機會	Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略 56-99 The Group is actively evaluating and measuring the financial impact of climate change risks on its business and will add climate-related financial disclosures in the near future. 本集團正在積極評估和衡量氣候變化風險對其業務的財務影響，並將在不久的將來增加與氣候相關的財務披露。
201-3	Defined benefit plan obligations and other retirement plans 確定給付制義務與其他退休計畫	Talent Development 人才發展 130-151 Annual Report 2022 – Directors' Statement 二零二二年度報告-董事會聲明 –
201-4	Financial assistance received from government 取自政府之財務援助	Annual Report 2022 – Other Income and (losses)/gains, net 二零二二年度報告-其他收入及(虧損)/收益淨額 –

Appendix I – GRI Content Index

附錄I—GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考／說明	Page Number 頁數
Anti-Corruption 反貪腐		
GRI 3: Material Topics 重大主題 2021		
3-3	Management of material topics 重大主題管理	About This Report 關於本報告 Sustainability Governance 可持續發展管治
		10-23 38-55
GRI 205: Anti-corruption 反貪腐 2016		
205-1	Operations assessed for risks related to corruption 已進行貪腐風險評估的營運據點	Annual Report 2022 – Audit Committee 二零二二年度報告—審計委員會 The risk assessments and internal control conducted by the Group for all operating projects have already included risks of corruption. 本集團對所有經營項目進行的風險評估和內部控制均已將腐敗風險納入其中。
		–
205-2	Communication and training about anti-corruption policies and procedures 有關反貪腐政策和程序的溝通及訓練	Sustainability Governance 可持續發展管治 Number of employees participated in anti-corruption training 已接受反貪腐培訓的員工數據 – Number of senior management (percentage): 27 (5.5%) – 高管員工人數 (百分比): 27 (5.5%) – Number of middle-level management (percentage): 190 (38.5%) – 中層員工人數 (百分比): 190 (38.5%) – Other employees (percentage): 277 (56.0%) – 其他員工人數 (百分比): 277 (56.0%) All trained employees are located within mainland China. 所有培訓員工均位於中國內地。
		38-55
205-3	Confirmed incidents of corruption and actions taken 已確認的貪腐事件及採取的行動	Appendix III – Compliance with Relevant Laws and Regulations that Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況
		228-232

Appendix I – GRI Content Index
附錄I – GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數	
Anti-Competitive Behaviour 反競爭行為			
GRI 3: Material Topics 重大主題 2021			
3-3	Management of material topics 重大主題管理	About This Report 關於本報告	10-23
		Sustainability Governance 可持續發展管治	38-55
GRI 206: Anti-competitive Behavior 反競爭行為 2016			
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices 反競爭行為、反托拉斯和壟斷行為的法律行動	Appendix III – Compliance with Relevant Laws and Regulations that Have a Significant Impact on Everbright Water 附錄III – 對光大水務有重大影響的相關法律及規例的遵守情況	228-232
Energy Efficiency 能源效益			
GRI 3: Material Topics 重大主題 2021			
3-3	Management of material topics 重大主題管理	About This Report 關於本報告	10-23
		Environmental Responsibility 環境責任	100-129
GRI 302: Energy 能源 2016			
302-1	Energy consumption within the organisation 組織內部的能源消耗量	Environmental Responsibility 環境責任	100-129
		Key Statistics 主要數據	194-207
302-2	Energy consumption outside of the organisation 組織外部的能源消耗量	The products and services of Everbright Water's core business will not cause additional energy consumption to customers. 光大水務核心業務的產品和服務不會對客戶造成額外的能源消耗。	–
302-3	Energy intensity 能源密集度	Key Statistics 主要數據	194-207
302-4	Reduction of energy consumption 減少能源消耗	Key Statistics 主要數據	194-207
302-5	Reductions in energy requirements of products and services 降低產品和服務的能源需求	Key Statistics 主要數據	194-207

Appendix I – GRI Content Index

附錄I—GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數
Waste water Treatment, Usage of Water Resources 污水處理、水資源消耗		
GRI 3: Material Topics 重大主題 2021		
3-3	Management of material topics 重大主題管理	About This Report 關於本報告 Environmental Responsibility 環境責任
		10-23 100-129
GRI 303: Water and Effluents 水與放流水 2018		
303-1	Interactions with water as a shared resource 共享水資源之相互影響	Environmental Responsibility 環境責任
		100-129
303-2	Management of water discharge-related impacts 與排水相關衝擊的管理	Environmental Responsibility 環境責任
		100-129
303-3	Water withdrawal 取水量	Key Statistics 主要數據
		194-207
303-4	Water discharge 排水量	Key Statistics 主要數據
		194-207
303-5	Water consumption 耗水量	Key Statistics 主要數據
		194-207
GHG Management and Climate Change Mitigation 溫室氣體管理及氣候變化的應對		
GRI 3: Material Topics 重大主題 2021		
3-3	Management of material topics 重大主題管理	About This Report 關於本報告 Environmental Responsibility 環境責任
		10-23 100-129

Appendix I – GRI Content Index

附錄I—GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考／說明	Page Number 頁數
305-4	GHG emissions intensity 溫室氣體排放強度	Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略
		Key Statistics 主要數據
305-5	Reduction of GHG emissions 溫室氣體排放減量	Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略
		Key Statistics 主要數據
305-6	Emissions of ozone-depleting substances (ODS) 臭氧層破壞物質(ODS)的排放	The Group's operation does not involve emissions of significant ozone-depleting substances (ODS). 本集團的運營並不涉及顯著的臭氧消耗物質(ODS)排放。
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions 氮氧化物(NOx)、硫氧化物(SOx), 及其它顯著的氣體排放	Environmental Responsibility 環境責任
		The Group does not keep an inventory of volatile organic compounds (VOCs) and odour emissions as they are fugitive in nature. Nevertheless, the amount of VOCs emissions is negligible, while the Group strictly complies with prevailing local standards in odour emissions control. 本集團沒有保留揮發性有機化合物(VOC)及氣味排放的紀錄, 因為它們是無組織的排放。儘管如此, VOC的排放量極微, 與此同時本集團嚴格遵守氣味控制方面的現行當地標準。
Waste Management 廢物管理		
GRI 3: Material Topics 重大主題 2021		
3-3	Management of material topics 重大主題管理	About This Report 關於本報告
		Environmental Responsibility 環境責任
GRI 306: Waste 廢棄物 2020		
306-1	Waste generation and significant waste-related impacts 廢棄物的產生與廢棄物相關顯著衝擊	Environmental Responsibility 環境責任
306-2	Management of significant waste-related impacts 廢棄物相關顯著衝擊之管理	Environmental Responsibility 環境責任

Appendix I – GRI Content Index
附錄I – GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數
306-3	Waste generated 廢棄物的產生	Environmental Responsibility 環境責任
		Key Statistics 主要數據
306-4	Waste diverted from disposal 廢棄物的處置移轉	Environmental Responsibility 環境責任
		Key Statistics 主要數據
306-5	Waste directed to disposal 廢棄物的直接處置	Environmental Responsibility 環境責任
		Key Statistics 主要數據
Occupational Health and Safety 職業健康與安全		
GRI 3: Material Topics 重大主題 2021		
3-3	Management of material topics 重大主題管理	About This Report 關於本報告
		Talent Development 人才發展
GRI 403: Occupational Health and Safety 職業安全衛生 2018		
403-1	Occupational health and safety management system 職業安全衛生管理系統	Sustainability Governance 可持續發展管治
		Talent Development 人才發展
		The Group's ESHS Management System was formulated in accordance to the <i>Labour Law of the PRC</i> , <i>Work Safety Law of the PRC</i> , <i>Criminal Law of the PRC</i> , the <i>Social Insurance Law of the PRC</i> , <i>Occupational health and safety management systems – Requirements with guidance for use</i> (GB/T 45001-2020), <i>Environmental management systems – Requirements with guidance for use</i> (GB/T 24001-2016), etc. 本集團的ESHS管理體系乃依據《中華人民共和國勞動法》、《中華人民共和國安全生產法》、《中華人民共和國刑法》、《中華人民共和國社會保險法》、《職業健康安全管理体系要求及使用指南》(GB/T 45001-2020)、《環境管理体系要求及使用指南》(GB/T 24001-2016)等編製。
403-2	Hazard identification, risk assessment, and incident investigation 危害辨識、風險評估及事故調查	Talent Development 人才發展

Appendix I – GRI Content Index

附錄I – GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數
403-3	Occupational health services 職業健康服務	Talent Development 人才發展 130-151
403-4	Worker participation, consultation, and communication on occupational health and safety 有關職業安全衛生之工作者參與、諮詢與溝通	Talent Development 人才發展 130-151
403-5	Worker training on occupational health and safety 有關職業安全衛生之工作者訓練	Talent Development 人才發展 130-151
403-6	Promotion of worker health 工作者健康促進	Talent Development 人才發展 130-151
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships 預防和減緩與業務關係直接相關聯之職業安全衛生的衝擊	Talent Development 人才發展 130-151
403-8	Workers covered by an occupational health and safety management system 職業安全衛生管理系統所涵蓋之工作者	Talent Development 人才發展 The Group's ESHS Management System covers all employees of the Group, third-party contractors and subcontractors working onsite. 本集團的ESHS管理體系覆蓋了本集團所有員工、第三方承包商及分包商駐場工人。 The Group conducts annual internal audit for the ESHS Management System, but has not yet conducted external audits. 本集團每年對ESHS管理體系進行內部審核，但暫未進行外部審核。 130-151
403-9	Work-related injuries 職業傷害	Talent Development 人才發展 Key Statistics 主要數據 The major risks of work-related injuries in the water industry include slips and falls, and hearing loss. 水務行業的主要工傷風險則包括滑倒、跌倒、及聽力損害。 130-151 194-207

Appendix I – GRI Content Index
附錄I – GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數
403-10 Work-related ill health 職業病	Talent Development 人才發展	130-151
	Key Statistics 主要數據 The major risks of work-related ill health in the water industry include waterborne diseases, airborne infections, and skin ailments. 水務行業的主要職業病風險包括水源性疾病、空氣傳播疾病及皮膚病。	194-207
Employee Training 員工培訓		
GRI 3: Material Topics 重大主題 2021		
3-3 Management of material topics 重大主題管理	About This Report 關於本報告	10-23
	Talent Development 人才發展	130-151
GRI 404: Training and Education 訓練與教育 2016		
404-1 Average hours of training per year per employee 每名員工每年接受訓練的平均時數	Talent Development 人才發展	130-151
	Key Statistics 主要數據	194-207
404-2 Programs for upgrading employee skills and transition assistance programs 提升員工職能及過渡協助方案	Talent Development 人才發展	130-151
404-3 Percentage of employees receiving regular performance and career development reviews 定期接受績效及職業發展檢核的員工百分比	Talent Development 人才發展	130-151

Appendix I – GRI Content Index

附錄I—GRI內容索引

Disclosure Number 披露編號	Relevant Chapter(s) or Other Reference/Explanation 相關章節或其他參考/說明	Page Number 頁數
Child Labour and Forced Labour 童工與強制勞工		
GRI 3: Material Topics 重大主題 2021		
3-3 Management of material topics 重大主題管理	About This Report 關於本報告	10-23
	Talent Development 人才發展	130-151
GRI 408: Child Labor 童工 2016		
408-1 Operations and suppliers at significant risk for incidents of child labour 營運據點和供應商使用童工之重大風險	Sustainability Governance 可持續發展管治	38-55
	Talent Development 人才發展	130-151
GRI 409: Forced or Compulsory Labor 強迫或強制勞動 2016		
409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour 具強迫或強制勞動事件重大風險的營運據點和供應商	Sustainability Governance 可持續發展管治	38-55
	Talent Development 人才發展	130-151
Disaster and Emergency Planning and Response 災難及應急預案規劃		
GRI 3: Material Topics 重大主題 2021		
3-3 Management of material topics 重大主題管理	About This Report 關於本報告	10-23
	Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略	56-99
	Environmental Responsibility 環境責任	100-129
	Talent Development 人才發展	130-151

Appendix II – SEHK ESG Reporting Guide Content Index 附錄II—聯交所《環境、社會及管治報告指引》內容索引

ESG Aspects ESG層面	Requirement 描述	Relevant Chapter(s) and/or Explanation 報告章節及/或說明
A. Environmental 環境		
A1: Emission 層面A1：排放物		
General Disclosure 一般披露	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 GHG, discharges into water and land, and generation of hazardous and non-hazardous waste 有關廢氣及溫室氣體排放、向水及土地的排污、有害及無害廢棄物的產生等的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Environmental Responsibility 環境責任 Appendix III – Compliance with Relevant Laws and Regulations That Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況
KPI A1.1	The types of emissions and respective emissions data. 排放物種類及相關排放數據。	Environmental Responsibility 環境責任 Qingdao Waste Water Treatment Project (Maidao Plant) and Qingdao Waste Water Treatment Project (Maidao Plant) Upgrading uses the biogas generated from sludge to generate electricity through cogeneration. During the Reporting Period, this process emitted approximately 6.6 tonnes of NO _x , 0.3 tonnes of SO ₂ , 0.5 tonnes of suspended particulates and 0.7 tonnes of carbon monoxide. 青島污水處理項目(麥島廠)及青島污水處理項目(麥島廠)提標改造透過熱電聯產,使用污泥產生的沼氣發電。於報告期內,此過程約排放6.6噸NO _x 、0.3噸SO ₂ 、0.5噸懸浮粒子及0.7噸一氧化碳。 Except for Qingdao Waste Water Treatment Project (Maidao Plant) and Qingdao Waste Water Treatment Project (Maidao Plant) Upgrading, the Group's projects do not involve fixed source combustion of fuels under normal operating conditions. Therefore, gas emissions generated by the Group are not considered significant. 除青島污水處理項目(麥島廠)及青島污水處理項目(麥島廠)提標改造外,本集團的項目於正常運營情況下並不會涉及固定源的燃料燃燒,故此本集團產生的氣體排放並不顯著。
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) GHG emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). 直接(範圍1)及能源間接(範圍2)溫室氣體排放量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略 Key Statistics 主要數據
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). 所產生有害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	The Group's operations do not generate significant amount of hazardous waste 本集團的運營不會產生顯著數量的有害廢棄物
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). 所產生無害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	Environmental Responsibility 環境責任 Key Statistics 主要數據
KPI A1.5	Description of emission target(s) set and steps taken to achieve them. 描述所訂立的排放量目標及為達到這些目標所採取的步驟。	Environmental Responsibility 環境責任 Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標 The Group is committed to reducing emissions. Except for Qingdao Waste Water Treatment Project (Maidao Plant) and Qingdao Waste Water Treatment Project (Maidao Plant) Upgrading, the Group's projects do not involve fixed source combustion of fuels under normal operating conditions. Therefore, no quantitative emission targets are set by the Group. 本集團致力減低大氣排放。除青島污水處理項目(麥島廠)及青島污水處理項目(麥島廠)提標改造外,本集團的項目於正常運營情況下並不會涉及固定源的燃料燃燒,故此本集團並沒有制定量化排放目標。

Appendix II – SEHK ESG Reporting Guide Content Index

附錄II—聯交所《環境、社會及管治報告指引》內容索引

ESG Aspects ESG層面	Requirement 描述	Relevant Chapter(s) and/or Explanation 報告章節及/或說明
A. Environmental 環境		
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them 描述處理有害及無害廢棄物的方法，及描述所訂立的減廢目標及為達到這些目標所採取的步驟。	Environmental Responsibility 環境責任 Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標 The Group's operations do not generate significant amount of hazardous waste, hence no targets were set for hazardous wastes reduction. 本集團的運營不會產生顯著數量的有害廢棄物，故此沒有訂立有害廢棄物減廢目標。
A2: Use of Resources 層面A2：資源使用		
General Disclosure 一般披露	Policies on the efficient use of resources, including energy, water and other raw materials 有效使用資源（包括能源、水及其他原材料）的政策。	Environmental Responsibility 環境責任
KPI 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). 按類型劃分的直接及/或間接能源（如電、氣或油）總耗量（以千個千瓦時計算）及密度（如以每產量單位、每項設施計算）。	Environmental Responsibility 環境責任 Key Statistics 主要數據
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility). 總耗水量及密度（如以每產量單位、每項設施計算）。	Environmental Responsibility 環境責任 Key Statistics 主要數據
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them. 描述所訂立的能源使用效益目標及為達到這些目標所採取的步驟。	Environmental Responsibility 環境責任 Devoted to Achieving Sustainable Development Goals 致力實踐可持續發展目標
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them. 描述求取適用水源上可有任何問題，以及所訂立的用水效益目標及為達到這些目標所採取的步驟。	Environmental Responsibility 環境責任 Regarding water sourcing, all of the Group's projects have obtained the respective environmental impact assessment approvals and water-drawing permits. There are no associated issues in sourcing water that is fit for purpose. 在取水方面，本集團的所有項目均獲得相關的環評批覆及取水證，我們在獲得適用水源上沒有發現任何問題。
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced. 製成品所用包裝材料的總量（以噸計算）及（如適用）每生產單位佔量。	The Group's main products are clean drinking water and treated waste water, which does not involve packaging material usage 本集團的主要產品為已潔淨的飲用水及已處理的污水，並不涉及使用包裝物料。
A3: The Environmental and Natural Resources 層面A3：環境及天然資源		
General Disclosure 一般披露	Policies on minimising the issuer's significant impacts on the environment and natural resources. 減低發行人對環境及天然資源造成重大影響的政策。	Environmental Responsibility 環境責任
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them. 描述業務活動對環境及天然資源的重大影響及已採取管理有關影響的行動。	Environmental Responsibility 環境責任
A4: Climate Change 層面A4：氣候變化		
General Disclosure 一般披露	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer. 識別及應對已經及可能會對發行人產生影響的重大氣候相關事宜的政策。	Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them. 描述已經及可能會對發行人產生影響的重大氣候相關事宜，及應對行動。	Sustainable Development Strategies to Address Climate Change Risks 應對氣候變化風險的可持續發展策略

Appendix II – SEHK ESG Reporting Guide Content Index 附錄II—聯交所《環境、社會及管治報告指引》內容索引

ESG Aspects ESG層面	Requirement 描述	Relevant Chapter(s) and/or Explanation 報告章節及/或說明
B. Social B. 社會		
Employment and Labour Practices 僱傭及勞工常規		
B1: Employment 層面B1：僱傭		
General Disclosure 一般披露	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. 有關薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、多元化、反歧視以及其他待遇及福利的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Talent Development 人才發展 Appendix III – Compliance with Relevant Laws and Regulations That Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況
KPI B1.1	Total workforce by gender, employment type (for example, full-or part-time), age group and geographical region. 按性別、僱傭類型（如全職或兼職）、年齡組別及地區劃分的僱員總數。	Talent Development 人才發展 Key Statistics 主要數據
KPI B1.2	Employee turnover rate by gender, age group and geographical region. 按性別、年齡組別及地區劃分的僱員流失比率。	Talent Development 人才發展 Key Statistics 主要數據
B2: Health and Safety 層面B2：健康與安全		
General Disclosure 一般披露	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. 有關提供安全工作環境及保障僱員避免職業性危害的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Talent Development 人才發展 Appendix III – Compliance with Relevant Laws and Regulations That Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year. 過去三年（包括匯報年度）每年因工亡故的人數及比率。	Talent Development 人才發展 Key Statistics 主要數據
KPI B2.2	Lost days due to work injury 因工傷損失工作日數。	Talent Development 人才發展 Key Statistics 主要數據
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored. 描述所採納的職業健康與安全措施，以及相關執行及監察方法。	Talent Development 人才發展
B3: Development and Training 層面B3：發展及培訓		
General Disclosure 一般披露	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. 有關提升僱員履行工作職責的知識及技能的政策。描述培訓活動。	Talent Development 人才發展
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management). 按性別及僱員類別（如高級管理層、中級管理層等）劃分的受訓僱員百分比。	Talent Development 人才發展
KPI B3.2	The average training hours completed per employee by gender and employee category 按性別及僱員類別劃分，每名僱員完成受訓的平均時數。	Talent Development 人才發展 Key Statistics 主要數據

Appendix II – SEHK ESG Reporting Guide Content Index

附錄II—聯交所《環境、社會及管治報告指引》內容索引

ESG Aspects ESG層面	Requirement 描述	Relevant Chapter(s) and/or Explanation 報告章節及/或說明
B. Social B. 社會		
Employment and Labour Practices 僱傭及勞工常規		
B4: Labour Standards 層面B4：勞工準則		
General Disclosure 一般披露	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. 有關防止童工或強制勞工的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Talent Development 人才發展 Appendix III – Compliance with Relevant Laws and Regulations That Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour. 描述檢討招聘慣例的措施以避免童工及強制勞工。	Talent Development 人才發展 The Group regularly reviews its employment practice to ensure compliance with the applicable laws and regulations in preventing child and forced labour. 本集團定期檢討其招聘措施以確保遵守適用於有關避免童工及強制勞工的法律及規例。
KPI B4.2	Description of steps taken to eliminate such practices when discovered. 描述在發現違規情況時消除有關情況所採取的步驟。	The Group has zero tolerance towards such practice and such violation (if any) will be subject to internal disciplinary actions or handled by relevant authorities. 本集團並不容忍此違規情況。如有發現，將根據內部處分或交給有關部門處理。
Operating Practices 運營慣例		
B5: Supply Chain Management 層面B5：供應鏈管理		
General Disclosure 一般披露	Policies on managing environmental and social risks of the supply chain 管理供應鏈的環境及社會風險政策。	Sustainability Governance 可持續發展管治
KPI B5.1	Number of suppliers by geographical region. 按地區劃分的供應商數目。	Sustainability Governance 可持續發展管治
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored. 描述有關聘用供應商的慣例，向其執行有關慣例的供應商數目，以及相關執行及監察方法。	Sustainability Governance 可持續發展管治
KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored. 描述有關識別供應鏈每個環節的環境及社會風險的慣例，以及相關執行及監察方法。	Sustainability Governance 可持續發展管治
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored. 描述在揀選供應商時促使多用環保產品及服務的慣例，以及相關執行及監察方法。	Sustainability Governance 可持續發展管治
B6: Product Responsibility 層面B6：產品責任		
General Disclosure 一般披露	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. 有關所提供產品和服務的健康與安全、廣告、標籤及私隱事宜以及補救方法的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Sustainability Governance 可持續發展管治 Environmental Responsibility 環境責任 Appendix III – Compliance with Relevant Laws and Regulations That Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況 There is no law or regulation that has a significant impact on the Group regarding advertising, labelling and privacy matters relating to products and services provided by the Group. 本集團並無有關所提供產品和服務的廣告、標籤及私隱事宜的相關法律或規例對其構成重大影響。 The Group has not identified material concerns in its operations regarding advertising and labelling, dedicated policies are not in place. 本集團並未發現運營中有關廣告及標籤事宜的重大問題，故此，本集團並無相關專門政策。

Appendix II – SEHK ESG Reporting Guide Content Index 附錄II—聯交所《環境、社會及管治報告指引》內容索引

ESG Aspects ESG層面	Requirement 描述	Relevant Chapter(s) and/or Explanation 報告章節及/或說明
B. Social B. 社會		
Employment and Labour Practices 僱傭及勞工常規		
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons. 已售或已運送產品總數中因安全與健康理由而須回收百分比。	The Group did not have any products recalled for safety and health reasons in 2022. 本集團於二零二二年沒有因安全與健康理由而須回收產品。
KPI B6.2	Number of products and service related complaints received and how they are dealt with. 接獲關於產品及服務的投訴數目以及應對方法。	The Group did not receive complaints relating to products and service in 2022. 本集團於二零二二年沒有接獲關於產品及服務的投訴。
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights. 描述與維護及保障知識產權有關的慣例。	Sustainability Governance 可持續發展管治
KPI B6.4	Description of quality assurance process and recall procedures. 描述質量檢定過程及產品回收程序。	Environmental Responsibility 環境責任 Due to the specific nature of the Group's water environment management business, recall procedures are not applicable to its products and services provided. 本集團業務性質為水環境綜合治理，當中並沒有適用的產品及服務回收程序。
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored. 描述消費者資料保障及私隱政策，以及相關執行及監察方法。	Sustainability Governance 可持續發展管治
B7 :Anti-corruption 層面B7：反貪污		
General Disclosure 一般披露	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 有關防止賄賂、勒索、欺詐及洗黑錢的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Talent Development 人才發展 Appendix III – Compliance with Relevant Laws and Regulations That Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況
KPI 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. 於報告期內對發行人或其僱員提出並已審結的貪污訴訟案件的數目及訴訟結果。	Appendix III – Compliance with Relevant Laws and Regulations That Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況
KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored. 描述防範措施及舉報程序，以及相關執行及監察方法。	Sustainability Governance 可持續發展管治 Talent Development 人才發展
KPI B7.3	Description of anti-corruption training provided to directors and staff. 描述向董事及員工提供的反貪污培訓	Sustainability Governance 可持續發展管治
Community 社區		
B8 :Community Investment 層面B8：社區投資		
General Disclosure 一般披露	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. 有關以社區參與來了解運營所在社區需要和確保其業務活動會考慮社區利益的政策。	Community Engagement 社區參與
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport). 專注貢獻範疇(如教育、環境事宜、勞工需求、健康、文化、體育)。	Community Engagement 社區參與
KPI B8.2	Resources contributed (e.g. money or time) to the focus area. 在專注範疇所動用資源(如金錢或時間)。	Community Engagement 社區參與 In 2022, the Group participated in 4 charitable activities, contributing to a total of 26 volunteers, 104 volunteer service hours and HK\$509,547 worth of charitable donations. 二零二二年，本集團參與了4次慈善公益活動，貢獻了共26位義工、104個義務服務小時和涉及509,547港元的捐款金額。

Appendix III – Compliance with Relevant Laws and Regulations that Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況

Aspect A1: Emissions

In order to protect and improve the environment, prevent pollution and other public hazards, safeguard public health, promote the development of ecological conservation, and promote sustainable economic and social development, China has enacted a large number of laws to protect environmental resources. Key laws and regulations applicable to the Group include the *Environmental Protection Law of the PRC*, *The Environmental Impact Assessment Law of the PRC*, *Water Pollution Prevention and Control Law of the PRC*, *Marine Environment Protection Law of the PRC*, *Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste*, *Law of the PRC on Prevention and Control of Environmental Noise Pollution and Atmospheric Pollution Prevention and Control Law of the PRC*. These laws and regulations provide clear requirements on air and GHG emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. The Group shall comply with all the above laws and regulations, otherwise it may be subject to penalties, suspension of operation, and/or legal actions against the Group by regulatory authorities.

In 2022, there was no confirmed case of non-compliance in relation to environmental protection that would have a significant impact on the Group. Please refer to the chapter entitled “Environmental Responsibility” of this Report on how Everbright Water ensures compliance with the applicable environmental laws and regulations.

層面A1：排放物

為保護和改善環境，防治污染和其他公害，保障公眾健康，推進生態文明建設，促進經濟和社會的可持續發展，中國制定實施了大量環境資源保護的法律。適用於本集團的主要法律及規例包括《中華人民共和國環境保護法》、《中華人民共和國環境影響評價法》、《中華人民共和國水污染防治法》、《中華人民共和國海洋環境保護法》、《中華人民共和國固體廢物污染環境防治法》、《中華人民共和國環境噪聲污染防治法》及《中華人民共和國大氣污染防治法》。該等法律及規例對廢氣及溫室氣體排放、向水及土地的排污以及有害及無害廢棄物的產生等方面提供了明確要求。本集團必須遵循以上相關的環境法律法規，否則監管機構有權對本集團作出罰款、勒令停運及／或採取法律行動。

二零二二年並無任何與環境保護相關並對本集團有重大影響的已確實違規事件。如欲了解更多光大水務遵守相關環境法律法規的情況，請參閱本報告的「環境責任」一章。

Appendix III – Compliance with Relevant Laws and Regulations that Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況

Aspect B1: Employment

The *Labour Law of the PRC*, *Labour Contract Law of the PRC*, the *Employment Ordinance* (Chapter 57, Laws of Hong Kong) and the *Employment Act* of Singapore stipulate the legal obligations and responsibilities of employers to provide employment protection and benefits covering compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. The *Social Insurance Law of the PRC* is formulated for the purpose of regulating sickness insurance, occupational injury insurance, maternity insurance, medical care insurance, retirement insurance, and death insurance, and also clarifies the legal liabilities of the employers. The *Regulation on the Management of Housing Provident Fund* of the PRC is formulated for the purpose of maintaining the lawful rights and interests of housing provident fund owners. These laws and regulations provide relevant protection for the Group's employees and safeguard their lawful rights. The Group will continue to comply with all relevant employment laws and regulations to protect the Group's most valuable asset – employees.

In 2022, there was no confirmed case of non-compliance in relation to the Group's employment practices that would have a significant impact on the Group. Please refer to the chapter entitled "Talent development" of this Report on how Everbright Water ensures compliance with the applicable employment laws and regulations.

層面B1：僱傭

《中華人民共和國勞動法》、《中華人民共和國勞動合同法》、香港法例第57章《僱傭條例》及《新加坡僱傭法》提供了全面的僱傭保障和福利，涵蓋對薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、多元化、反歧視以及其他待遇及福利方面的要求，明確了僱主的法定義務和責任。《中華人民共和國社會保險法》規定了疾病、工傷、生育、醫療、退休及死亡保險，並釐清了僱主的相關法律責任。中國《住房公積金管理條例》則維護了住房公積金所有者的合法權益。以上法律法規為本集團的員工提供相關保障，保護員工的合法權利。本集團將繼續遵守所有相關的僱傭法律法規，保障本集團最寶貴的財富—員工。

二零二二並無任何與僱傭相關並對本集團有重大影響的已確實違規事件。如欲了解更多光大水務遵守相關僱傭法律法規的情況，請參閱本報告的「人才發展」一章。

Appendix III – Compliance with Relevant Laws and Regulations that Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況

Aspect B2: Health and Safety

The *Labour Law of the PRC*, and *Work Safety Law of the PRC* commit to the protection of labour safety and production safety, and require manufacturing organisations and employers to provide a safe working environment and protect employees from occupational hazards. The *Social Insurance Law of the PRC* is formulated for the purpose of regulating sickness insurance, occupational injury insurance, maternity insurance, medical care insurance, retirement insurance, and death insurance, and also clarifies the legal liabilities of the employers. Compliance with these laws and regulations is the Group's top priority as workplace safety is of critical importance to each and every employee of the Group. As a socially responsible enterprise, the Group complies with the relevant health and safety laws to provide employees with a safe workplace and suitable insurance.

In 2021, there was no confirmed case of non-compliance in relation to health and safety that would have a significant impact on the Group. Please refer to the chapter entitled "Talent Development" of this Report on how Everbright Water ensures compliance with the applicable laws and regulations relating to health and safety.

Aspect B4: Labour Standards

The *Labour Law of the PRC*, the *Employment Ordinance* (Chapter 57, Laws of Hong Kong) and the *Employment Act* of Singapore set out clear rules for preventing child labour and forced labour, and provide the legal liabilities of employers who violate the relevant laws and regulations. Everbright Water highly values human rights and aims to demonstrate its "People-Oriented" corporate spirit through strictly complying with the relevant labour standards.

In 2022, there was no confirmed case of non-compliance in relation to labour standards that would have a significant impact on the Group. Please refer to the chapter entitled "Talent Development" of this Report on how Everbright Water ensures compliance with the applicable laws and regulations relating to labour standards.

層面B2：健康與安全

《中華人民共和國勞動法》及《中華人民共和國安全生產法》旨在維護勞動安全衛生及生產安全，要求生產經營單位及僱主提供安全工作環境及保障僱員避免職業性危害。《中華人民共和國社會保險法》則規定了疾病、工傷、生育、醫療、退休及死亡保險，並釐清了僱主的相關法律責任。遵守這些法律法規是本集團的首要任務，因為工作場所的安全對本集團每一位員工都十分重要。為員工提供安全工作環境及合適保險是光大水務作為良心企業的實踐，本集團會嚴守相關健康與安全法律法規。

二零二二年並無任何與健康與安全相關並對本集團有重大影響的已確認違規事件。如欲了解更多光大水務遵守相關健康與安全法律法規的情況，請參閱本報告的「人才發展」一章。

層面B4：勞工準則

《中華人民共和國勞動法》、香港法例第57章《僱傭條例》及《新加坡僱傭法》對防止童工和強制勞工列有明確規定，並詳細地闡述了違反相關法律及法規的僱主的法律責任。光大水務高度重視人權，透過遵守相關勞工準則，充分反映其「以人為本」的企業精神。

二零二二年並無任何與勞工準則相關並對本集團有重大影響的已確實違規事件。如欲了解更多光大水務遵守相關勞工法律法規的情況，請參閱本報告的「人才發展」一章。

Appendix III – Compliance with Relevant Laws and Regulations that Have a Significant Impact on Everbright Water 附錄III—對光大水務有重大影響的相關法律及規例的遵守情況

Aspect B6: Product Responsibility

The *Product Quality Law of the PRC* is formulated with the aim of strengthening product quality monitoring, improving product quality, specifying product quality responsibility, safeguarding legal rights of customers, as well as protecting social and economic order. These laws and regulations provide clear requirements on health and safety matters and remedial methods relating to products and services provided. The Group complies with the relevant laws and regulations in relation to product responsibility to ensure customers receive safe, reliable and private service.

The *Water Pollution Prevention and Control Law of PRC* stipulated the specific requirements on effluent. The Group is a leading integrated water environment management enterprise in China that provides integrated water environment management services. The Group ensures that all of its effluents undergo high efficiency waste water treatment and strictly comply with prevailing requirements on effluents.

In 2022, there was no confirmed case of non-compliance in relation to product responsibility that would have a significant impact on the Group. Please refer to the chapter entitled “Environmental Responsibility” of this Report on how Everbright Water ensures compliance with the applicable laws and regulations relating to product responsibility.

層面B6：產品責任

《中華人民共和國產品質量法》的制定旨在加強對產品質量的監督管理，提高產品質量水準，明確產品質量責任，保護消費者的合法權益，維護社會經濟秩序。該等法律對產品和服務的健康與安全事宜以及補救方式提供了明確的要求。本集團遵循相關的產品責任法律法規以確保顧客獲得安全可靠及私隱的服務。

《中華人民共和國水污染防治法》對排放水方面提供了明確要求。本集團作為領先的水環境綜合治理企業，業務主要為提供水環境綜合治理服務。本集團確保其水治理服務的排放水均經過高效的污水處理，並嚴格遵從相關排放要求。

二零二二年並無任何與產品責任相關並對本集團有重大影響的已確實違規事件。如欲了解更多光大水務遵守相關產品責任法律法規的情況，請參閱本報告的「環境責任」一章。

Appendix III – Compliance with Relevant Laws and Regulations that Have a Significant Impact on Everbright Water 附錄III – 對光大水務有重大影響的相關法律及規例的遵守情況

Aspect B7: Anti-corruption

The *Anti-Unfair Competition Law of the PRC*, the *Prevention of Bribery Ordinance* (Chapter 201, Laws of Hong Kong) and the *Prevention of Corruption Act* of Singapore set out clear rules on preventing bribery, extortion, fraud, and money laundering. These laws and regulations aim to maintain social integrity and fairness, prevent unfair competition, and protect the legal rights of service providers and customers. The Group firmly believes that misconduct such as corruption has significant negative impact to the business development. Therefore, the Group strictly complies with the relevant anti-corruption laws and regulations to maintain a good reputation and enhance its competitiveness.

In 2022, there was no confirmed case of non-compliance in relation to anti-corruption practices that would have a significant impact on the Group, and there was no legal case related to corruption raised and trial concluded towards the Group or its employees. Please refer to the chapter entitled “Talent Development” of this Report on how Everbright Water ensures compliance with the applicable laws and regulations relating to anti-corruption practices.

層面B7：反貪污

《中華人民共和國反不正當競爭法》、香港法例第201章《防止賄賂條例》及新加坡《防止貪污法令》對防止賄賂、勒索、欺詐及洗黑錢行為提供了明確的規定，旨在維護社會廉潔公平，制止不正當競爭行為，保護服務提供者和消費者的合法權益。本集團深信貪污等不當行為對業務發展百害而無一利，因此嚴格遵循相關的反貪污法律法規，致力維持本集團良好的聲譽及提升公司競爭力。

二零二二年並無任何與反貪污相關並對本集團有重大影響的已確實違規事件，亦沒有對本集團或其僱員提出及審結的貪污訴訟案件。如欲了解更多光大水務遵守相關反貪污法律法規的情況，請參閱本報告的「人才發展」一章。

2022

Sustainability Report

可持續發展報告

CHINA EVERBRIGHT WATER LIMITED
中國光大水務有限公司



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