

(於中華人民共和國註冊成立之股份有限公司)

Stock Code 股份代號: SZ002672, HK00895

# 2019 Environmental, Social

Environmental, Social and Governance Report 環境、社會及管治報告

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### Contents 目錄

1.	About the Report 關於本報告	2
2.	Message from the Chairman 董事長致辭	4
3.	Sustainable Development Management 可持續發展管理	6
4.	Core Business of the Group 集團核心業務	10
5.	Building a Green Environment Together 共建綠色環境	21
6.	Strict and Standardized Operation 嚴格規範運營	44
7.	Talent Cultivation and Development 人才培育發展	57
8.	Community Development and Care 社區建設與關懷	68
9.	Appendix I: Sustainability Data Statements 附錄一: 可持續發展數據摘要	72
10.	Appendix II: Hong Kong Stock Exchange ESG Reporting Guide Index 附錄二: 《環境、社會及管治報告指引》內容索引	78



### 1. About the Report 關於本報告

This is the Environmental, Social and Governance Report (the "Report") published by Dongjiang Environmental Company Limited (the "Company" or "Dongjiang Environmental") and its subsidiaries (the "Group" or "we", "our" or "us"), which summarises the principles and sustainability philosophy of the Group in fulfilling its corporate social responsibility, elaborates the communications between the Group and its major stakeholders and describes our vision and commitments for corporate social responsibility.

#### **BASIS FOR PREPARATION**

This Report is prepared in accordance with the Environmental, Social and Governance Reporting Guide (the "Guide") as set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited and the scope covered is in compliance with the reporting principles under the Guide. We have also complied with the "Comply or Explain" provisions under the Guide to address the environmental and social impacts from various businesses and operating activities of the Group. Please refer to the official website of the Group (www.dongjiang.com.cn) and its annual report for details of the Group's environmental and corporate governance.

#### **REPORTING PERIOD AND SCOPE**

The content of this Report covers the sustainability practices of the Company during the period from 1 January 2019 to 31 December 2019 (the "Year" or "Reporting Period"), including the Group's headquarters in Shenzhen and all operating environmental protection projects in China which the Group has operational control. The key performance indicators relating to environmental subject area presented in this Report cover the Group's headquarters and five major subsidiaries of four business categories. We wish to increase the scope and depth of such coverage and constantly monitor our performance in sustainability in the future.

#### **REPORTING LANGUAGE**

This report is published in Traditional Chinese and English versions, which may be downloaded from the official website of the Group (www.dongjiang.com.cn) and the website of The Stock Exchange of Hong Kong (www.hkex.com.hk).

東江環保股份有限公司(下稱「本公司」 或「東江環保」)及其附屬公司(下稱「本集 團」或「我們」)發佈環境、社會及管治報 告(下稱「本報告」),概述本集團履行企 業社會責任所秉持的原則及可持續發展 理念,闡述我們與主要持份者的溝通, 並對企業社會責任及可持續發展提出願 景和承諾。

#### 編製依據

本報告按照香港聯合交易所有限公司 證券上市規則附錄二十七一《環境、社 會及管治報告指引》(下稱《指引》)編製 而成,涵蓋內容亦符合《指引》中要求 的匯報原則,並已遵守《指引》載列的 「不遵守就解釋」條文相應地闡述本集 團各類業務及運營活動對環境和社會 的影響。有關本集團環境及企業管治的 詳細信息,請參閱本集團的官方網站 (www.dongjiang.com.cn)及年報。

#### 報告時間及範圍

本報告披露之內容涵蓋了於二零一九年 一月一日至二零一九年十二月三十一日 (下稱「本年度」或「報告期內」)期間官 可持續發展理念的工作,覆蓋範圍包拉 於中國及擁有運營控制權斷的關鍵局有位 於中國及擁有運營控制權疇的關鍵績內 目。本報告所列之環境範疇的關鍵績內 的五家主要子公司,寄望未來能擴大涵 蓋範圍及深度,持續監測可持續發展表 現。

#### 報告語言

本報告以繁體中文及英文版本發佈,可透過本集團的官方網站 (www.dongjiang.com.cn)及香港聯合交易 所網站(www.hkex.com.hk)下載。



1. About the Report 關於本報告

### **CONTACT**

We value the opinions of stakeholders and the public on this Report. If 我們非常重視各持份者和公眾對此報告 you have any enquiries or recommendations, please feel free to contact 的看法,若 閣下有任何查詢或建議, us through the following ways:

Company address:	Dongjiang Environmental Building,	
	No. 9 Langshan Road,	
	North Zone of Hi-tech Industrial Park,	
	Nanshan District, Shenzhen	
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### 聯繫方式

歡迎通過以下方式與本集團聯絡:

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### 2. Message from the Chairman 董事長致辭

With "Lucid Waters and Lush Mountains are Invaluable Assets" as its corporate mission, the Group always adheres to the concept of sustainability for its business operation with a view to contributing to the development of ecological civilization in China and the building of a beautiful China.

2019 was a crucial year for domestic environmental protection enterprises. Both global trade growth and industrial production slowed down, and China's economic development has entered into a critical period of supply-side reform, industrial transformation and upgrade and high-quality development, while pollution prevention also reached a decisive period. Facing the market trend of intensifying industry competition and changes in supply and demand structure, we adhered to the general guideline of "making progress while maintaining stability" to focus on our main business of hazardous waste disposal and implement the operation strategies of "capturing market share, improving areas of weakness, strengthening innovation, facilitating transformation and controlling risks", at the same time actively consolidating the existing market share and exploring opportunities in new segments. During the Reporting Period, the Group leveraged on its technology advantages to expand into the highly difficult waste disposal market, improved the disposal technology, strengthened the business connection between regional markets and production facilities, and improved the products and services to further meet the market demand. It has also further broadened the customer base to approximately 30,000 customers, representing a year-on-year increase of 15.4%.

以「綠水青山就是金山銀山」作為我們企 業的使命,本集團一直秉持可持續發展 的理念來運營業務,為發展中國生態文 明建設,共建美麗中國作出貢獻。

2019年是國內環保經營企業的關鍵一 年,全球貿易和工業生產增速放緩,我 國經濟發展模式進入了供給側改革、產 業轉型升級和高質量發展的重要時期, 污染防治攻堅戰也進入了決勝時期。 面對行業競爭熱度提高、供需結構變化 等市場趨勢,我們堅持[穩中求進]的工 作總基調,聚焦危廢主業,圍繞「搶市 場、補短板、強創新、促轉型、控風險」 的經營主線,積極鞏固現有市場份額和 尋找新的細分市場機會。報告期內,本 集團利用技術優勢開拓高難度處置廢物 市場,完善處置技術,提升區域市場和 生產基地的業務銜接,促進產品和服務 進一步緊貼市場需求,進一步擴大客戶 群,在期客戶同比增長15.4%,達到約3 萬家。



### 2. Message from the Chairman 董事長致辭

The year 2019 was critical for project construction of the Group, during which we accelerated the construction of key projects and facilitated the projects in obtaining business licenses and commencement of operation. During the Reporting Period, we maintained a leading position in terms of total capacity of qualified hazardous waste operation, which exceeded 1,900,000 tons per year, with overall capacity utilization rate exceeded 44%, prevailing over the national average level. Currently, the total designed capacity of the projects under construction and completed projects applying for hazardous waste business license amounted to approximately 200,000 tons per year, while the total designed capacity of proposed projects was approximately 410,000 tons per year. Such abundant project reserves have laid a solid foundation for our sustainable and high-quality development.

Looking forward into the new year, with the in-depth implementation of green development, "zero-waste cities" and other relevant policies, coupled with the stricter requirements imposed on the hazardous waste disposal industry resulting from the successive implementation of environmental policies, professional and large-scale hazardous waste disposal projects may become mainstream in the industry. As such, we will focus on the main business of hazardous waste disposal, strengthen the research and development of core technologies, enhance refined management operation ability, adhere to the development strategy of endogenous growth and external expansion, maintain the scale of industry investment, accelerate the building of disposal capacity, deepen the expansion into various market segments of the hazardous waste disposal market, improve the matching of qualification and capacity utilization rate; accelerate the expansion of the business of ecological and environmental protection services, deepen the expansion along the industrial chain of environmental protection industry, expand into market segments such as municipal waste disposal, major projects of solid waste disposal, soil rehabilitation, environmental protection technology services, auto dismantling, electronic product dismantling and power battery recycling.

As the pioneer of domestic environmental protection industry and one of the domestic environmental protection enterprises with the most comprehensive waste treatment qualifications, the Group will enhance its hazardous waste disposal capability and quality, strengthen its advantages in terms of cost, technology, capital and scale, maintain its core competitive strengths, and ensure the sustainable development of its core business of hazardous waste disposal with a view to providing better support to the environment, the economy and people's livelihood.

Dongjiang Environmental Company limited Tan Kan Chairman July 2020 2019年是本集團的項目建設年,我們加快推進重點項目建設和推動項目領證投產。報告期內我們的危廢經營資質總量 繼續領跑,超過190萬噸/年,整體資 質利用率超過44%,領先於全國平均水 平。目前在建和建成正在申請危廢經營 許可的項目合計設計產能約為20萬噸/ 年,擬建項目合計設計產能約為41萬 噸/年,豐富的項目儲備為我們實現可 持續高質量發展提供了堅實支撐。

本集團作為我國環保行業最早的參與 者,國內廢物處理資質最齊全的環保經 營企業之一,我們將增強危廢處置能 力和質量,加強成本優勢、技術優勢、 資本優勢和規模優勢,保持良好的核心 競爭優勢,確保核心危廢業務的持續發 展,更好地為環境經濟民生服務。

**東江環保股份有限公司** 譚侃 *董事長* 2020年7月

## 3. Sustainable Development Management 可持續發展管理

With becoming a respectable leader in the environmental protection industry as its corporate vision, the Group regards corporate social responsibility as an important task in its business operation while promoting business development, striving to reduce the potential impact on the environment and the society and bring greater contribution to social development and social progress.

### 3.1 ENVIRONMENTAL, SOCIAL AND GOVERNANCE STRUCTURE

The Group recognizes the importance of sustainable development management and has been committed to incorporating the concept of sustainability into our overall strategies, policies and business plans. We have established an Environmental, Social and Governance ("ESG") Working Group comprising executive directors, management from various business segments and representatives from different key departments of the Company with the aim of managing risks related to ESG issues more effectively and promoting and supervising the implementation of ESG policies by all departments. The Board assumes full responsibility of our ESG strategies and reporting and is responsible for coordinating, evaluating and determining the appropriateness and effectiveness of the Group's ESG risk management and internal control system. 本集團以「做受人尊敬的環保產業領跑 者」作為企業願景,在驅進業務發展的同時,我們把企業社會責任視為業務營運 的重要任務,致力減少對環境及社會可 能帶來的影響,並為推動社會發展和進 步作出更大的貢獻。

#### 3.1 環境、社會及管治架構



### 3. Sustainable Development Management 可持續發展管理

### **3.2 COMMUNICATION WITH STAKEHOLDERS**

The Group highly values the engagement of stakeholders and sees their expectations and requirements as areas of concern when formulating strategies and implementing decisions regarding sustainable development, which can help us identify existing and potential risks and opportunities. Accordingly, stakeholder engagement is an integral part of our sustainability management. Through waste management, environmental services and other related businesses, we actively maintain close communication with external and internal stakeholders including shareholders/investors, government/regulatory authorities, customers, employees, suppliers, the community and research and development institutions to gain understanding of their opinions and needs. Over the past year, we interacted with stakeholders through the following communication channels in an effort to fully understand their expectations and requirements in respect of the Group's sustainable development and adjust our sustainability strategies correspondingly.

#### 3.2 與持份者溝通

Major stakeholders 主要持份者	Expectations and requirements 期望與訴求	Main communication channels 主要溝通途徑	
● 「 Shareholders/Investors 股東/投資者	<ul> <li>Robust operational compliance 穩健合規運營</li> <li>Good returns on investment 良好投資回報</li> <li>Effective risk management 有效的風險管理</li> </ul>	<ul> <li>General meetings 股東大會</li> <li>Annual reports 年報報告</li> <li>Shareholders visits 股東參觀活動</li> <li>"Investor Relations" section 「投資者關係」專欄</li> </ul>	
<b>Government/Regulatory</b> authorities 政府/監管機構	<ul> <li>Comprehensive solutions 全面解決方案</li> <li>Environmental compliance 環保合規</li> <li>Supporting community livelihood 支持社區民生</li> </ul>	<ul> <li>Regular reports 定期報告</li> <li>Meetings 會議</li> <li>Site visits 現場考察</li> <li>Written responses to consultation 對諮詢的書面回應</li> </ul>	
Customers 客戶	<ul> <li>Quality products and services 優質產品和服務</li> <li>Scientific research and development 科研及開發</li> </ul>	<ul> <li>Website and emails of the Group 集團網頁及郵箱</li> <li>Daily operation/exchange 日常營運/交流</li> <li>Opinion survey 意見調查</li> </ul>	

### 3. Sustainable Development Management 可持續發展管理

Major stakeholders 主要持份者	Expectations and requirements 期望與訴求	Main communication channels 主要溝通途徑
<mark>Employees</mark> 僱員	<ul> <li>Stable employment 提供穩定就業</li> <li>Reasonable welfare and benefits 合理福利待遇</li> <li>Safe working environment 安全工作環境</li> </ul>	<ul> <li>Channels for employees to express their opinions 僱員表達意見的渠道</li> <li>Performance appraisal 工作表現評核</li> <li>Employee survey 僱員調研</li> </ul>
<b>Suppliers</b> 供應商	<ul> <li>Integrity and mutual benefit 誠信互惠</li> <li>Fair procurement 公平採購</li> </ul>	<ul> <li>Procurement procedures 採購程序</li> <li>Supply chain management system 供應鏈管理制度</li> </ul>
Community 社會各界	<ul> <li>Promoting social harmony 促進社會和諧</li> <li>Supporting charitable activities 支援公益活動</li> <li>Advocating energy saving and emissions reduction 宣導節能減排</li> </ul>	<ul> <li>Organizing charitable activities 開展公益活動</li> <li>Environmental protection education 環保教育</li> <li>Opinion survey 意見調查</li> </ul>
<b>Research and</b> development institutions 研發機構	<ul> <li>Technological exchanges and cooperation 技術交流與合作</li> </ul>	<ul> <li>Meetings 會議</li> <li>Site visits 現場考察</li> </ul>

### 3. Sustainable Development Management 可持續發展管理

The national policies of pollution prevention have entered into a decisive period. The in-depth implementation of green development, "zero-waste cities" and other relevant policies continued to provide great momentum for the development of the green and environmental protection industry, which has also created new opportunities and drivers for the Group's development. Upholding the mission of "A World without Waste", the Group openly and proactively listened to and understood the concerns of internal and external stakeholders so as to determine the scope of ESG-related matters to be covered by this Report. The Group focuses on four major areas: "Building a Green Environment Together", "Strict and Standardized Operation", "Talent Cultivation and Development" and "Community Development and Care", through which it would encourage the Group to work together as a whole and do its utmost to jointly fulfill the commitment to sustainable development.

隨著全國污染防治攻堅戰進入決戰期, 線色發展和「無廢城市」等政策的深入 推進,繼續大力驅動綠色環保產業, 為本集團創造了新的發展機遇和動力。 本集團創造了新的發展機遇和動力。 來集團款和積極主動的態度聆聽及了。 報告與環境、社會及管治相關的範違。 報告與環境、社會及管治相關的範疇。 電境」、「嚴格規範運營」、「人才培育 展」和「社區建設與關懷」,推動整個集團。 上下一心,竭力共同履行可持續發展。



#### Sustainable development strategy 可持續發展策略



Dongjiang Environmental was established in 1999. It is a holding subsidiary of Guangdong Rising Assets Management Co., Ltd., a provincial state-owned enterprise of Guangdong, and an environmental protection company listed in Shenzhen and Hong Kong (stock codes: SZ002672 and HK00895). The Group is a one-stop integrated environmental service provider. Driven by technological innovation, the Group has established operations covering the whole industry chain based upon its business of harmless disposal of industrial (hazardous) waste and recycling of resources and supplemented by other businesses such as municipal waste treatment, water treatment, environmental engineering and environmental testing with the aim of providing customized services to enterprises at different development stages and offering comprehensive solutions of waste management to various cities.

During the Reporting Period, Dongjiang Environmental has 10 hazardous waste operational enterprises in Guangdong Province with total approved treatment capacity of 1,060,000 tons per year and accounted for 18% of the total treatment capacity of the province, including incineration capacity of 38,600 tons per year and landfill capacity of 86,600 tons per year, which accounted for 25% and 67% of the total incineration capacity and the total landfill capacity of the province, respectively. Dongjiang Environmental has more than 70 subsidiaries. With business network covering markets in the core regions of the hazardous waste disposal industry such as the Guangdong-Hong Kong-Macao Greater Bay Area, Yangtze River Delta, the Beijing-Tianjin-Hebei region, the Bohai Economic Rim and the Midwest region, it provides services to over 30,000 customers and enjoys prominent leading edges in the hazardous waste disposal industry of China.

With a focus on promoting waste recycling and harmless collaborative disposal techniques, Dongjiang Environmental has propelled the transformation and upgrades of the industry with technological innovation, improved the quality of its service with professional management and accelerated the expansion of its business scale through capital operation. Through its unwavering efforts in exploring innovation, Dongjiang Environmental has achieved leapfrog development and established itself as a leading one-stop integrated environmental service provider that is driven by technological innovation and based upon its hazardous waste disposal business. 東江環保創立於1999年,是廣東省屬企 業廣東省廣晟資產經營有限公司的控股 子公司,深港兩地上市環保企業(股票代 碼:SZ002672,HK00895)。本集團是一 站式綜合環保服務提供商,致力於以技 術創新為驅動,以工業(危險)廢物的無 害化處置和資源化利用為基礎,配套發 展市政廢物處理、水治理、環境工程、 環境檢測等業務,構建完整產業鏈,為 企業的不同發展階段提供定制化服務, 為城市的廢物管理提供整體解決方案。

報告期內,東江環保在廣東省內共有危險廢物經營企業10家,總核准處理能力106萬噸/年,佔全省總處理能力的18%,其中,焚燒處置能力3.86萬噸/年,佔全省總焚燒能力的25%,填埋處置能力8.66萬噸/年,佔全省填埋能力的67%。東江環保下設70多家子公司,業務網絡覆蓋粵港澳大灣區、長三角、京津冀、環渤海及中西部市場等危廢行業核心區域,服務客戶超過3萬家,在全國危廢行業領先優勢明顯。

東江環保重點推進廢物資源化和無害化 工藝協同處理,以技術創新推動產業轉 型升級,以專業管理提升服務水平,以 資本運作加速規模擴張,通過自身不斷 開拓創新實現跨越式發展,把東江環保 打造成以技術創新為導向,以危廢為基 礎的優秀一站式綜合環保服務提供商。





Note: The above map is only available in Chinese

#### **4.1 PARTY BUILDING**

Under the guidance of Xi Jinping's thought on socialism with Chinese characteristics for a new era and adhering to the leadership of the Party, the Party Committee of the Group devoted greater efforts to Party building and strengthened Party discipline in all aspects, thereby optimizing the governance system and hence improving its governance ability. We also pushed forward the integration of party building with our production and operation with a view to encouraging the Company to develop strong momentum of internal growth by way of reform. 備註:以上地圖僅提供中文版

#### 4.1 黨建工作

本集團的黨委以習近平新時代中國特色 社會主義思想為指導,堅持黨的領導, 加強黨的建設,全面從嚴治黨,完善治 理體系,提升治理能力。我們推動黨建 工作與生產經營工作相融合,激發公司 改革發展強大內生動力。

Through in-depth implementation of the theme education of "Remaining True to Our Original Aspiration and Keeping Our Mission Firmly in Mind", the Group continued to enhance its theoretical knowledge by earnestly studying theories of the Party Committee in form of central learning group and arranging in-depth research and study by personnel at the primary level. In addition, we organized a series of celebration activities for the 70th anniversary of the founding of the People's Republic of China, and diversified activities were launched to facilitate theme education, including the "Theme Essay Competition", "Singing Contest in Praise of China" and "Knowledge Quiz Competition", all of which have further ignited the patriotism among Party members.

Greater efforts were made to enhance political building of the leadership team. We organized in-depth study on the "Opinion of the Central Committee of the Communist Party on Enhancement of Political Building of the Party" (《中共中央關於加強黨的政治建設的意見》) and the "Regulation of the Communist Party of China on Disciplinary Actions" (《中國共產黨紀律處分條例》) to further enhance the awareness of compliance and discipline. We have also strengthened the leadership of the Party Committee within the Company through measures such as convening Party Committee meeting to elect members for the new session of the Party Committee and revising the "Rules of Procedure of the Party Committee". By earnestly implementing the requirement of "Four Synchronizations and Four Connects", coupled with the adjustment to the internal organization structure of the Company, we steadily facilitated the establishment of the Party organizations under various business department and promoted the establishment of Party branches by 4 subsidiaries, thereby expanding the coverage of Party organizations.

In order to optimize and improve the overall standard of work in relation to party building, we continued to promote standardised building of Party organizations at all levels centering on five major aspects, namely "organization, team, system, activity and security". We insisted on providing services relating to our production and operation to eliminate the "Not In My Backyard Effect" among hazardous waste disposal enterprises. We also actively evaluated the rating of Party members where advanced and excellent employees would be rewarded, and the "Party Member Commando" (黨員突擊隊) was formed. Meanwhile, an appraisal system for Party building was implemented to refine our three-year action plan for the development of grassroot Party organizations.

本集團深入貫徹「不忘初心、牢記使命」 主題教育,持續強化理論武裝,認真開 展黨委理論學習中心組學習,深入基層 一線調研。除此之外,我們組織開展新 中國成立70周年系列慶祝活動,和「主題 徵文」、「歌唱祖國」、「知識競賽」等形 式多樣的主題教育活動,進一步激發廣 大黨員群眾的愛國熱情。

我們加強班子政治建設,組織深入學習 《中共中央關於加強黨的政治建設的意 見》和《中國共產黨紀律處分條例》,進 一步增強規矩意識和紀律意識。我們強 化黨委在公司的領導作用,召開黨員大 會,選舉產生新一屆黨委班子,修訂《黨 委會議事規則》。我們認真落實「四個同 步、四個對接」要求,結合公司內部組織 架構調整,穩步推進事業部黨組織的設 置,推動4家下屬企業成立黨支部,擴大 黨組織覆蓋面。

為完善和提升黨建工作整體水平,我們 圍繞「組織、隊伍、制度、活動和保障」 五個方面持續深入推進所屬各級黨組織 規範化建設。我們堅持服務生產經營, 消除危廢企業「鄰避效應」;積極開展黨 員評星定級工作和創先評優活動,成立 「黨員突擊隊」;貫徹落實黨建考評制 度,加強基層黨組織建設三年行動計劃。



#### 4.2 BUSINESS HIGHLIGHTS OF THE GROUP

As an urban environmental management expert with strong support from our state-owned shareholder, the Group leverages its advantages as a state-owned enterprise in terms of capital, talent, standardised management and government resources, and adheres to the principle of sustainability in its operation, striving

to become a leading enterprise in the hazardous waste disposal industry with the largest business scale, most comprehensive qualifications and most standardised operation. The Group provides comprehensive waste treatment and environmental services to various cities. Adhering to the strategic direction of innovation-driven development, it invests in research and development of advanced technology on an ongoing basis and accelerates the transformation of technological achievements, which has in turn created drivers for the high quality development of its businesses. The Group is also making strides in achieving Sustainable Development Goal 11: sustainable cities and communities set by the United Nations ("UN") with a view to contributing to the development of an inclusive, safe and beautiful environment as well as sustainable cities and communities around the world.

#### 4.2 集團業務亮點

SUSTAINABLE CITIES



發展的原則經營業務,致力成為危廢行 業中,規模最大、資質最全、運營最規 範的龍頭企業。本集團為城市提供全額 的廠物處理和環境服務,以創新引領領 政略為導向,不斷投入高新技術 發,加速轉化科技成果,為高質量的 聯合國提出的可持續發展目標11:可 持續城市和社區,致力協助世界建設包 容、安全、美好環境和可持續的城市和 社區。



The Group continued to realise stable development with business network covering the Guangdong-Hong Kong-Macao Greater Bay Area, Yangtze River Delta, the Beijing-Tianjin-Hebei region, the Bohai Economic Rim and the Midwest region. During the Year, the Group adhered to the strategy of making progress while maintaining stability and, with a focus on its main business of hazardous waste disposal, accelerated the construction progress of key projects and specialized in the business of harmless treatment and recycling of hazardous waste. During the Reporting Period, we have obtained qualification for industrial hazardous waste disposal with treatment capacity of over 1,900,000 tons per year, including incineration capacity of approximately 300,000 tons per year, landfill capacity of approximately 180,000 tons per year, recycling capacity of approximately 820,000 tons per year and physical and chemical treatment capacity of approximately 600,000 tons per year. 本集團繼續實現穩健發展,業務網絡覆 蓋粵港澳大灣區、長三角、京津冀、環 渤海及中西部地區。本年度,本集團堅 持穩中求進的策略,聚焦危廢主業,加 快重點項目建設,主力發展危險廢物無 害化處理及資源化生產業務,報告期內 我們已取得工業危險廢物資質超過190萬 噸/年,其中焚燒能力約30萬噸/年, 填埋能力約18萬噸/年,資源化能力約 82萬噸/年,物化能力約60萬噸/年。

### Approved Capacity of Hazardous Waste Treatment Qualification 危廢資質核定量



Note: Operating revenue is up to 31 December 2019; approved capacity of hazardous waste treatment qualification is up to 31 March 2020

附註:營業收入截至2019年12月31日:危廢資質核定量 截至2020年3月31日



During the Year, the Group made dedicated efforts in expanding into the highly difficult waste disposal market, striving to provide highquality products and services that are closely aligned with the market demands. Accordingly, the number of customers increased significantly to approximately 30,000, representing a year-on-year increase of 15.4%. During the Reporting Period, the Group recorded operating revenue of RMB3.459 billion, representing an increase of approximately 5.33% as compared to the same period of 2018 and demonstrating steady business growth. The operating revenue of industrial waste treatment, the core business of the Group, for the Year was RMB1.667 billion, representing a year-on-year increase of approximately 29.55%, and the operating revenue of recycled products was RMB1.075 billion.

The Group continued to strenuously develop its main business of hazardous waste disposal. During the Reporting Period, we have completed the construction of and operated 28 hazardous waste treatment and disposal facilities in 9 provinces in China, and continued to deepen the expansion in two core markets, namely Guangdong and Eastern China. The Company has 10 hazardous waste disposal enterprises in Guangdong Province and 6 hazardous waste disposal enterprises in Jiangsu and Zhejiang. Benefited from the commencement of operation of harmless treatment projects, our market competitiveness and profitability in Eastern China have been further improved.

Furthermore, as a critical year for project construction, the Group vigorously pushed forward the construction of key projects and facilitated the projects in obtaining business licenses and commencement of operation during the Year. As of the end of the Reporting Period, 4 enterprises of the Company obtained business licenses for hazardous waste disposal, including Shaoguan Green<sup>#</sup> (9,500 tons per year for incineration, 95,000 tons per year for recycling and 26,000 tons per year for physical and chemical treatment), Nantong Dongjiang<sup>#</sup> (21,800 tons per year for incineration and 114,000 tons per year for physical and chemical treatment) and Zhuhai Yongxingsheng<sup>#</sup> Technical Transformation Project (incremental incineration capacity of approximately 330,000 tons per year. The harmless treatment capacity has grown rapidly and the capacity structure continued to improve.

In line with the national goal of building a moderately prosperous society in all respects, the business of municipal waste treatment and disposal is of utmost importance for improving people's lives. As such, the Group strives to improve treatment efficiency to meet people's growing needs for a better life. During the Year, the operating revenue of municipal waste treatment and disposal was RMB230 million while renewable energy business of landfill gas power generation projects generated 160 million kWh in 2019, which can reduce greenhouse gas ("GHG") emissions and help the country address climate change. 本年度,本集團致力拓展高難度處置廢 物市場,提供緊貼市場需求的優質產品 及服務,在期客戶大幅提升,達到約3 萬家,同比增長15.4%。本集團於報告 期內營業收入34.59億元人民幣,較2018 年同期增長約5.33%,達致業務穩步增 長。工業廢物處理作為本集團核心業 務,本年度營業收入為16.67億元人民 幣,同比增長約29.55%,資源化產品營 業收入為10.75億元人民幣。

本集團繼續大力發展危廢主業,本報告 期內,我們已經在全國9個省份建成運營 危險廢物處理處置基地28個,並持續深 化發展廣東和華東兩大核心市場,在廣 東省內共有10家危險廢物經營企業,在 江蘇、浙江共有6家危廢經營企業,受益 於無害化項目投產,我們華東區域的市 場競爭力和盈利能力進一步提高。

此外,本年度作為本集團的項目建設 年,大力推進重點項目建設和項目領證 投產。至本報告期末,公司共有4家企 業取得危廢經營許可證,分別是韶關再 生資源\*(焚燒0.95萬噸/年,資源化利 用9.5萬噸/年,物化2.6萬噸/年)、南 通東江\*(焚燒6萬噸/年、物化11.4萬噸/ 年),珠海永興盛\*技改項目新增焚燒資 質約1萬噸/年,合計增加能力約33萬 噸/年,無害化能力迅速增長,持續優 化產能結構。

配合國家全面建成小康社會的目標,市 政廢物處理處置的業務對於改善人民生 活尤為重要。因此,本集團致力提升處 理效率,以滿足人民日益增長的美好生 活需要。本年度市政廢物處理處置量 業收入為2.3億元人民幣;而利用填埋氣 發電項目的再生能源業務,於2019年發 電量達1.6億度,減少溫室氣體的排放, 為國家應對氣候變化作出貢獻。

韶關再生資源指韶關東江環保再生資源發展有限 公司、南通東江指南通東江環保技術有限公司、 濰坊東江指濰坊東江環保藍海環境保護有限公 司、珠海永興盛指珠海市斗門區永興盛環保工業 廢棄物回收綜合處理有限公司。

<sup>\*</sup> Shaoguan Green means Shaoguan Green Recycling Resource Development Co., Ltd., Nantong Dongjiang means Nantong Dongjiang Environmental Technology Co., Ltd., Weifang Dongjiang means Weifang Dongjiang Environmental Blue Sea Environmental Protection Co., Ltd., and Zhuhai Yongxingsheng means Zhuhai Yongxingsheng Environmental Industrial Waste Recycling and Integrated Treatment Co., Ltd..

While actively developing its businesses, the Group joined hands with its customers, suppliers, the government and the community to build a green environment, demonstrating the results of sustainable development under the concerted efforts of the Group. In 2019, despite the complicated and ever-changing international situation, the slowdown of global trade growth and industrial production, and intensifying industry competition, Dongjiang Environmental adhered to the principle of making progress while maintaining stability to consolidate the existing market share and actively explore new market opportunities, thereby maintaining strong core competitive strengths. In the coming year, taking hazardous waste disposal as its core business, the Group will step up its efforts in developing the business of ecological and environmental protection services and exploring new market opportunities with a view to realizing sustainable development of both the environment and society.

#### **4.3 OVERVIEW OF TECHNOLOGICAL ACHIEVEMENTS**

The Group has always insisted on the strategy of driving its development with technological innovation, and constantly speeds up the commercialization of technological achievements. During the Year, by implementing the innovative development strategy in full swing, the Group continued to recruit more research and development personnel and expand its research team. The Group has established various R&D platforms such as the Dongjiang Research Institute, as well as various pilot bases, key laboratories and inspection centers. In industry-universityresearch collaboration with various industrial alliances and universities, the Group strives to conduct market-driven technological research and development oriented with production and application, introduce new technology, seek technological cooperation and realise industrialized application. As a result of its unceasing work of innovation, research and development, the Group now possesses numerous core technologies in industrial waste liquid, waste residue and urban domestic garbage treatment, sludge treatment, kitchen waste treatment and recycling, and has extensive research and development achievements and technologies in the sectors of industrial hazardous waste treatment and municipal solid waste treatment, disposal and comprehensive utilization. During the Year, the Company obtained 88 new authorized patents, including 13 invention patents and 74 utility model patents. Overall, the Group had been granted a total of 350 authorized patents, outperforming domestic peers in terms of its overall technological level.

#### 4.3 技術成就概覽

本集團堅守以技術創新引領企業發展 的策略,不斷加速轉化科研成果。本年 度,本集團大力實施創新發展戰略,繼 續增聘研發人員,擴大研究團隊。本集 團設立了東江研究院、中試基地、重點 實驗室、檢測中心等研發平台,並與各 產業聯盟和多所大學作產學研合作, 開展以市場及生產應用為導向的技術 研發、技術引進及合作並產業化應用。 通過不斷創新研發,本集團掌握工業廢 液、廢渣、城市生活垃圾處理、污泥處 理、餐廚垃圾處理和資源化利用的多項 核心技術,並在工業危險廢物及城市固 體廢物處理處置和綜合利用等領域擁有 豐富的研發成果和技術。本年度,本公 司新增授權專利88項,其中發明專利13 項,實用新型專利74項,累計已獲得授 權專利350項, 整體技術水平領先於國內 同行。

Authorized patents granted 已獲得授權專利





The Group's Investment in Technological Research and Development 本集團技術研發投資	2019 2019年	2018 2018年
Number of R&D Personnel 研發人員數量(人)	481	449
Percentage of R&D Personnel 研發人員數量佔比	10.01%	9.83%
R&D Investment (RMB) 研發投入金額(人民幣)	161,689,882	166,704,032



#### **R&D AND INTRODUCTION OF NEW TECHNOLOGY**

Technical innovation is a powerful guarantee for the sustainable development of Dongjiang Environmental. Paying great attention to technology R&D, the Group sets up an independent R&D center at its inception which has now formed a relatively perfect R&D management system including innovative talent introduction and cultivation, innovative R&D organization management, institutionalized management of technical innovation and information management etc. During the Year, we constantly promoted technological innovation in line with the development of new business. During the Reporting Period, the R&D personnel of Dongjiang Environmental has launched a series of innovative and key R&D projects in respect of sewage treatment, waste mineral oil and organic solvents as well as recycling of heavy metals, which will become a strong power in terms of new environmental technology of Dongjiang Environmental in the future.

#### 新技術研發和引進

技術創新是東江環保可持續發展的有力保障。本集團高度重視技術研發,於成 立之初便設立了獨立的研發中心,現已 形成創新人才引進與培養、創新研發創新人才引進與培養、創新人才引進與培養、創新研發 管理、技術創新制度化管理體系。我 能管理等較為完善的研發管理體系。我 能 於本年度不斷推進技術創新,配合新 發 人員開展了一系列有關水處理,廢 新 定 、 將成為東江環保 新 環 保技術的強大力量。

Technological area	Technological theme	技術領域	技術主題	
Sewage treatment	Research on leachate decolourisation technology for domestic waste	污水處理	生活垃圾滲濾液脱色技 術研究	
	Research on technology for in-depth nickel and phosphorus removal of wastewater from electroless nickel plating		化學鍍鎳廢水深度脱磷 除鎳技術研究	
	Research on technology for in-depth treatment of wastewater containing cyanide		含氰廢水深度處理技術 研究	
	Development of technologies for recycling and treatment of waste liquid from glass thinning and etching		玻璃減薄蝕刻廢液資源 化及其處理技術開發	
Waste mineral oil and organic solvents	Emulsified wastewater treatment through dissolved-air floatation	廢礦物油 與有機溶	溶氣氣浮法處理乳化 廢水	
	Research on wet air catalytic oxidation technology for treatment of waste organic solvents	劑	濕式催化氧化技術處理 廢有機溶劑研究	
Recycling of heavy metals	Development of technologies for recycling $HNO_3$ -Cu( $NO_3$ ) <sub>2</sub> waste liquid	重金屬資 源化	HNO <sub>3</sub> -Cu(NO <sub>3</sub> ) <sub>2</sub> 廢液資源 化綜合利用技術開發	
	Development of technologies for producing copper (II) nitrate hydrate with cupric nitrate wastewater		利用硝酸銅廢液製備三 水硝酸銅技術開發	
	Quality enhancement technologies of copper sponge		提升海綿銅品質技術	
	Development of technologies for quality enhancement of ammonium chloride by- products		氯化銨副產品提質技術 開發	



### **4.4 HONORS AND AWARDS**

Since its establishment, leveraging its own state-of-the-art technological edges and extensive industry experience, Dongjiang Environmental was successively recognized as, among others, Key Environmental Protection Enterprise in Guangdong Province and in China, the entity of "National Major Demonstration Project in Resources Conservation and Environmental Protection", "1st Batch of National Pilot Entity of Circular Economy" and "National High-Tech & Innovative Technology Enterprise". In addition, from 2005 to 2009, Dongjiang Environmental was listed as one of the "Top 100 Highest Growth Potential Enterprises in China" by Forbes for five consecutive years.

In 2019, the Group received more recognitions from a number of organizations and authorities in form of honors and awards. The following table sets out the list of honors and awards received during the Year:

#### 4.4 榮譽獎項

自成立以來,憑藉自身先進的技術優勢 和資深的行業經驗,東江環保先後被評 定為廣東省及國家環保骨幹企業、「國家 資源節約與環境保護重大示範工程」單 位、「國家首批循環經濟試點單位」和「國 家高新技術企業」等。此外,東江環保在 2005年-2009年度連續5年入選《福布斯》 「中國潛力100榜」。

2019年,本集團更進一步得到多個單位 頒發榮譽及獎項的肯定,以下為本年度 獲得的榮譽及獎項一覽:

Honors/Awards	Awarding Body	榮譽/獎項	頒發機關
2018 Guangdong Province Enterprise of "Observing Contract and Valuing Credit"	Market Supervision Administration of Shenzhen Municipality	2018 年 度 廣 東 省 「守合同重信用」 企業	深圳市市場監督 管理局
Lu Ying Awards: Industrial Waste Comprehensive Treatment Benchmarking Enterprise (2019)	Lu Ying Awards Selection Committee	緣英獎:工業廢棄 物綜合處理標桿 企業(2019)	綠英獎評選委員會
Honorary Two-star Enterprise of 2019	Institute for Sustainable Innovation and Growth, School of Management, Fudan University/ Institute on Poverty Research, Peking University/ Institute for National Branding Strategy, East China Normal University	2019榮譽二星企業	復旦大學管理學院 可持續創新和增長 研究所/北京大學 貧困地區發展研究 院/華東師範大學 國家品牌戰略研究 中心
2019 Solid Waste Industry Segment Leading and Single- Capacity Leading Enterprises	E20 Environmental platform/ www.solidwaste.com.cn	2019年度固廢細分 領域領跑及單項能 力領跑企業	E20環境平台/ 中國固廢網
2019 Special Outstanding Award at China International Circular Economy Exhibition	China Association of Circular Economy/Organizing Committee for China International Circular Economy Exhibition	2019中國國際循環 經濟展覽會特別優 秀獎	中國循環經濟 協會/中國國際 循環經濟展覽會 組委會
2019 China's Strategic and Emerging Environmental Industry Leading Enterprise	Environmental Protection Alliance of China Strategic and Emerging Industry	中國戰略性新興環 保產業2019年度 領軍企業	中國戰略性新興 產業環保聯盟

Honors/Awards	Awarding Body
Honorary President Entity of the Sixth Council, Shenzhen Environmental Science Society	Shenzhen Environmental Science Society
Membership Certificate of Shenzhen Environmental Protection Industrial Association	Shenzhen Environmental Protection Industrial Association
Executive Director Level Entity of China Association of Circular Economy	China Association of Circular Economy
Director Entity of China Environmental Monitoring Magazine	China Environmental Monitoring Magazine
Membership Entity of Service Platform for Solid Waste Industry under China Environment News	China Environment News
Member of the Sixth Council of Guangdong Association of Environmental Protection Industry	Guangdong Association of Environmental Protection Industry
Membership Entity of the Sixth Council of Guangdong Association of Environmental Protection Industry	Guangdong Association of Environmental Protection Industry
Vice President Entity of the Eighth Council of Guangdong Society of Environmental Science	Guangdong Society of Environmental Science
Tan Kan, Vice President of the Eighth Council of Guangdong Society of Environmental Science	Guangdong Society of Environmental Science
Yao Shu (姚曙), an expert entitled to government allowance from the State Council	Ministry of Human Resources and Social Security of China
Xu Wenbin (徐文彬), a local leading talent of Shenzhen	Shenzhen Municipal Human Resources and Social Security Bureau

榮譽/獎項	頒發機關
深圳市環境科學學 會第六屆理事會 名譽會長單位	深圳市環境科學 學會
深圳市環境保護產 業協會會員證書	深圳市環境保護 產業協會
中國循環經濟協會 常務理事單位	中國循環經濟協會
中國環境監察雜誌 社理事單位	中國環境監察 雜誌社
中國環境報社固廢 產業服務平台會員 單位	中國環境報社
廣東省環境保護產 業協會第六屆理事 會理事	
廣東省環境保護產 業協會第六屆理事 會理事單位	•
廣東省環境科學學 會第八屆理事會副 理事長單位	廣東省環境科學 學會
廣東省環境科學學 會第八屆理事會副 理事長譚侃	廣東省環境科學 學會
國務院政府津貼 專家 — 姚曙	中國人力資源和 社會保障部
深圳市地方級領軍 人才一徐文彬	深圳市人力資源和 社會保障局



As a leading one-stop integrated environmental service provider and urban environmental management expert in China, Dongjiang Environmental has actively explored municipal waste treatment business, supplementing with various value-added businesses, such as environmental engineering and services based on its industrial waste (hazardous waste) treatment business, with an aim to develop an allround solid waste treatment service platform focused on waste recycling by fully leveraging its strength of the complete industrial chain. 作為國內領先的一站式綜合環保服務提 供商及城市環境管理專家,東江環保以 工業廢物(危廢)處理業務為基礎,積極 開拓市政廢物處理業務,配套發展環境 工程及服務等增值性業務,充分發揮完 整的產業鏈優勢,建設以廢物資源化為 核心的全能固廢處理服務平台。





#### **5.1 ENVIRONMENTAL PROTECTION BUSINESS**

This report sets out the results of the Group's environmental protection efforts from various aspects of business based on five major subsidiaries selected from the four core businesses, and the Group's significant results in sustainable development.

Adhering to the principle of compliant operation, the Group strictly abides by the laws and regulations of the state and regulatory agencies, including the Environmental Protection Law of the People's Republic of China, the Circular Economy Promotion Law of the People's Republic of China, National Ecological Environmental Protection Program and Environmental Impact Assessment Law of the People's Republic of China, etc. The Group has strengthened its corporate governance and risk prevention and control mechanisms to improve its management system, thereby achieving a steady growth and business development of the Group.

The Group also conducts regular internal and third-party monitoring regarding its environmental data, performs environmental impact assessment of the project and implements the "Three Simultaneous" system, as well as publishes the environmental impact assessment report and monitoring results on its official website, thereby providing information on pollutant emissions to the public on a real-time basis. The key pollutant discharge units of the Group has set up an automatic monitoring system of pollutant source, which is interconnected with the local Environmental Protection Bureau, enabling a real-time supervision by the environmental protection, harmlessness and recycling in respect of waste treatment. During the Year, we did not have any material environmental pollution accidents.

#### 5.1 環保業務

本報告在四大核心業務中選取五家主要 子公司,在各業務中多方面匯報本集團 對環境保護的成效,闡述本集團於可持 續發展方面的有力成果。

本集團堅守合規經營的原則,嚴格遵從 國家及監管機構的法律法規,包括《中華 人民共和國環境保護法》、《中華人民共 和國循環經濟促進法》、《全國生態環境 保護綱要》、《中華人民共和國環境影響 評價法》等,強化企業治理及風險防控機 制,以完善管理制度,達致本集團的穩 步增長與業務發展。

#### 5.1.1 INDUSTRIAL WASTE TREATMENT AND RECYCLING

Through the combination of different technical routes, the Group has carried out minimization and detoxification treatment with various self-owned hazardous waste treatment facilities by applying relevant treatment methods and approaches, such as physical and chemical treatment, biological treatment, incineration heat treatment and safe landfill, as well as conversion of substances with reuse value from waste into recycled products. The Group possesses the qualification for 44 categories of hazardous waste operations among the 46 categories set out in the National Hazardous Waste List with more than 200 types of waste for treatments, eliminating environmental pollution hazards across the country.

Regarding industrial hazardous waste treatment and recycling business, we have strived to promote the UN Sustainable Development Goal 12 — "Ensure Sustainable Consumption and Production Patterns", including, among others, the target of achieving harmless environmental management of chemicals and all wastes

by 2020 and significantly reducing their release to air, water and soil so as to minimize their adverse impacts on human health and the environment.

5.1.1 工業廢物處理及資源化利用

本集團結合不同技術路線,運用自設 的物理化學處理、生物處理、焚燒熱處 理、安全填埋等相關處理手段方法的多 種危險廢物處理設施,進行減量化處理 和無害化處置,並將廢物中具有再利用 價值的物質轉化為資源化產品。於《國家 危險廢物名錄》46大類中,本集團擁有 44大類危險廢物運營資質,處理種類逹 200餘種,為全國不同地區消除環境污染 的風險。

我們在工業危廢處理及 資源化利用的業務中, 致力推動聯合國可持續 發展目標12 一「採用可 持續的消費和生產模 式」,其中目標包括到



2020年,實現化學品和所有廢物的無害 環境管理,把它們排入大氣以及滲漏到 水和土壤的機率大大減低,盡可能減少 它們對人類健康和環境造成的負面影響。

Recycling and detoxification treatment of industrial hazardous waste 工業危險廢物資源化利用及無害化處理處置



Collection and transportation of industrial hazardous waste 工業危險廢物 收集與運輸

- Certified professional collection and transportation team 專業收運團隊,持證上崗
- Professional transport vehicles for hazardous waste 危險廢物專業運輸車輛
- Full-process seamless GPS monitoring 全程無縫GPS監控



CONSUMPTION

Recycling of industrial waste 工業廢物 資源化利用

- 15 treatment bases for recycling with an output of recycled products exceeding 80,000 tons per year 15個資源化處理基地,年輸 出再生產品超8萬噸
- Utilization rate of metal resources >99% 金屬資源利用率>99%
- Final discharge of NH-N of wastewater <5ppm 廢水氨氮最終排放<5ppm</li>



Detoxification disposal of industrial hazardous waste 工業危險廢物 無害化處置

- 3 provincial-level treatment bases for hazardous waste 3個省級危險廢物處理基地
- Hazardous waste processing capacity of over 1.9 million tons per year 年逾190萬噸危廢處理能力
- Emissions of flue gas met the EU standards 煙氣排放達到歐盟標準

Through the recycling of waste containing heavy metals, the Group's output of recycled products is more than 80,000 tons per year, supporting the target of the UN Sustainable Development Goal 12 — "By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse", thereby achieving the vision of sustainable management and efficient utilization of natural resources.

本集團通過對含重金屬廢物的資源化利 用,每年輸出再生產品逾8萬噸,支持 聯合國可持續發展目標12之中,提出到 2030年,通過預防、減排、回收和再利 用的方法,大大減少廢物產生,實現自 然資源的可持續管理和高效利用的願景。



The Group strictly follows relevant national and local environmental protection laws and regulations in its business operation, including the Environmental Protection Law of the People's Republic of China, the Standard for Pollution Control on General Industrial Solid Waste Storage and Disposal Site, the Standard for Pollution Control on Hazardous Waste Storage (GB 18597-2001), Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant (GB 18918-2002), the Measures for the Administration of Hazardous Waste Business Licenses and the Administrative Measures for Transfer Manifests of Hazardous Waste, etc. In the operation of industrial waste treatment and recycling business, the Group adopts high-standard operating standards from collection, transportation to disposal. Our professional transport vehicles which collect and transport hazardous waste are equipped with full-process seamless GPS system for strict monitoring.

本集團嚴格按照國家和地方相關的環保 法律法規運營業務,包括《中華人民共和 國環境保護法》、《一般工業固體廢物貯 存、處置場污染控制標準》、《危險廢物 貯存污染控制標準》(GB 18597-2001)、 《城鎮污水處理廠污染物排放標準》 (GB 18918-2002)、《危險廢物經營許可 證管理辦法》、《危險廢物轉移聯單管理 辦法》等。本集團在工業廢物處理及資源 化利用的業務運營中,從收集,運輸到 處理,均採用高規格的作業標準,我們 收運危險廢物的專業運輸車輛都配備全 程無縫GPS系統,以作嚴密監控。



#### Zhuhai Yongxingsheng Environmental Industrial Waste Recycling and Integrated Treatment Co., Ltd.

Zhuhai Yongxingsheng Environmental Industrial Waste Recycling and Integrated Treatment Co., Ltd. (hereinafter referred to as "Zhuhai Yongxingsheng") was established in December 1998. In 2015, Dongjiang Environmental officially became its controlling shareholder.

Zhuhai Yongxingsheng is an environmental treatment enterprise engaging in solid waste treatment with high-tech environmental protection technology. Its principal business is detoxification treatment, recycling and incineration treatment of industrial hazardous waste. The total treatment scale of industrial hazardous waste reaches 109,700 tons/year, including 300,000 waste drums, producing products such as alkaline copper, copper sulfate, etc. At present, Zhuhai Yongxingsheng possesses the gualifications for collection, treatment, comprehensive utilization and incineration of 17 categories of hazardous waste, including pharmaceutical waste, waste medicine, distillation residue, organic solvent waste, waste mineral oil, waste acid, waste alkali, etc., as well as the treatment of sludge and wastewater containing heavy metals such as copper and nickel. Zhuhai Yongxingsheng also possesses the qualification for road transport of dangerous goods. It can provide one-stop service for various solid and liquid hazardous wastes from collection at the place of generation, transportation, temporary storage, detoxification and disposal. It provides hazardous waste disposal services to more than 500 enterprises in Zhuhai, accounting for more than 80% of wastegenerating enterprises.

#### 珠海市斗門區永興盛環保工業廢棄物回 收綜合處理有限公司

珠海市斗門區永興盛環保工業廢棄物回 收綜合處理有限公司(以下簡稱「珠海永 興盛」)成立於1998年12月,2015年東江 環保正式成為其控股股東。

珠海永興盛是一家以環保高新技術經營 固體廢物處理的環保處理企業,主營業 務為工業危廢無害化處理、資源化利用 及焚燒處理,工業危險廢物總處理規模 達到10.97萬噸/年,含廢物包裝桶30萬 隻,產品有鹼銅、硫酸銅等。目前,珠 海永興盛擁有17大類危險廢物的收集、 處理、綜合利用、焚燒資質,包括醫藥 廢物、廢藥品、蒸餾殘渣、有機溶劑廢 物、廢礦物油、廢酸、廢鹼等,以及含 銅、鎳等重金屬的污泥、廢水的處理。 珠海永興盛同時擁有危險貨物道路運輸 資質,能提供將各類固態、液態危險廢 物從產生地進行收集、運輸、暫存、無 害化處置等「一站式」服務,為珠海市500 多家企業提供危險廢物處置服務,佔產 廢企業80%以上。

Zhuhai Yongxingsheng has been recognized as the National High and New Technology Enterprise in Guangdong Province, the Top Ten Corporate Taxpayers in Fushan Industrial Park, and the Advanced Unit of Association of Environmental Protection and Ecology in Zhuhai City, etc. In order to seize the opportunities of hazardous waste industry and regional development to facilitate the further development of Dongjiang Environmental's industry layout in Zhuhai and Guangdong, Zhuhai Yongxingsheng will continue to expand its production capacity and consolidate its business, at the same time improving its qualification and production capacity structure and seeking business breakthroughs, aiming to develop into an important hazardous waste disposal base in the Western Pearl River Delta. 珠海永興盛曾先後被評為廣東省高新技 術企業、富山工業園企業納税十強、珠 海市環保與生態協會先進單位等。為緊 抓危廢行業和區域發展機遇,助力東江 環保在珠海乃至廣東區域產業佈局的 又,珠海永興盛將不斷擴大產能和鞏固 業務,完善資質和產能結構,謀求經營 突破,發展成為珠三角西側重要的危險 廢物處置基地。

2019 Recycling Results	
Alkaline Copper	2,031.1 tons
Copper (II) Hydroxide	395.9 tons
Ammonium Chloride	2,895.6 tons

2019年資源化利用成果	
鹼 銅	2,031.1噸
氫氧化銅	395.9噸
氯化銨	2,895.6噸

The data from monitoring points of Zhuhai Yongxingsheng for 2019 was as follows:

2019年度珠海永興盛監測點位的監測情況如下:

Names of Major Pollutants and Characteristic Pollutants 主要污染物及 特徵污染物的 名稱	Limit of Emissions Concentration (Water: mg/l; Gas: mg/m <sup>3</sup> ) 排放濃度限值 (水:mg/l; 氣:mg/m <sup>3</sup> )	Pollutant Emissions Standards Implemented 執行的污染物 排放標準	Total Emissions (ton/year) 排放總量 (噸/年)	Total Ratified Emissions (ton/year) 核定的排放總量 (噸/年)	Monitoring Situation 監測情況
Wastewater: 廢水: Chemical Oxygen Demand ("COD") 化學需氧量("COD"), Ammonia Nitrogen ("NH <sub>3</sub> -N") 氨氮	COD: 180 <sup>NH</sup> ₃-H 氨氮	Discharge Limits of Water Pollutants (DB 44/26-2001) in Guangdong Province 廣東省《水污染物 排放限值》 (DB 44/26-2001)	COD: 0.44 <sup>NH</sup> 3 <sup>-H</sup> : 0.007 氨氮	COD: 8.18 <sup>NH</sup> <sub>3</sub> -H 氨氮	Qualified 達標
Waste Gas: 廢氣: Sulfur Dioxide ("SO <sub>2</sub> ") 二氧化硫("SO <sub>2</sub> ") Nitrogen Oxides ("NOx") 氮氧化物("NOx")	SO <sub>2</sub> : 300 NOx: 500	The Pollution Control Standards on Incineration of Hazardous Waste (GB 18484-2001) 《危險廢物焚燒污 染控制標準》 (GB 18484-2001)	SO <sub>2</sub> : 2.96 NOx: 12.33	SO <sub>2</sub> : 23.03 NOx: 46.35	Qualified 達標





#### Jiangmen Dongjiang Environmental Technology Ltd.

Located at the Heshan Industry Transfer Zone, Jiangmen Dongjiang Environmental Technology Ltd. (hereinafter referred to as "Jiangmen Dongjiang") is principally engaged in the collection and treatment of industrial waste generated by enterprises in the surrounding areas of Jiangmen and the Pearl River Delta. It processes 250,000 waste drums and is currently one of the largest-scale industrial hazardous waste comprehensive processing and recycling bases in China with an annual designed processing capacity of 199,500 tons.

Jiangmen Dongjiang produces copper sulfate, cupric subcarbonate and other copper salt products through comprehensive treatment and recycling of copper-contained waste, at the same time recycling industrial ammonium chloride through integrated treatment of ammonia nitrogen in waste liquid containing copper, so as to enable thorough treatment and full utilization of various pollutants in waste liquid containing copper. Organic solvents and waste mineral oil are recycled through reprocessing and reusing waste organic solvents and waste mineral oil. Industrial liquid and solid waste undergo minimization and detoxification treatment through physicochemical, evaporation and biochemical processes and advanced treatment systems before disposal. Overall, zero emissions of pollutants and maximized recycling rate of resources are achieved, and thus reducing the pollution on surrounding environment and sufficiently demonstrating the social, economic and environmental benefits of Jiangmen Dongjiang. Reasonable deployment of resources is achieved by reselling waste containers to downstream customers upon cleaning, derusting and painting treatment.

2019 Recycling Results	
Basic copper chloride	1,989.7 tons
Copper sulfate	128.0 tons
Copper (II) hydroxide	257.1 tons
Cupric subcarbonate	211.4 tons
Dry copper (II) carbonate	164.7 tons

#### 江門市東江環保技術有限公司

江門市東江環保技術有限公司(以下簡稱 「江門東江」)位於鶴山產業轉移工業園 內,主要收集和處理江門及珠三角等周 邊地區企業所產生的工業廢物,年設計 處理規模為19.95萬噸,以及處理25萬隻 廢包裝桶,是目前國內規模最大的工業 危險廢物綜合處理及回收利用基地之一。

2019年資源化利用成果	
鹼式氯化銅	1,989.7噸
硫酸銅	128.0噸
氫氧化銅	257.1噸
鹼式碳酸銅	211.4噸
烘乾碳酸銅	164.7噸

Meanwhile, Jiangmen Dongjiang has advanced emergency equipment and professionals who have independently completed emergency treatment in various environmental accidents and reduced pollution and risks of hazardous chemicals or waste to the surrounding environment. Jiangmen Dongjiang adheres to the rigorous management philosophy and high environmental awareness of the Group. On the external front, Jiangmen Dongjiang has leveraged its advanced technology and professional teams, and provided comprehensive one-stop services, including collection, transportation, treatment and disposal of hazardous waste, to various industries. On the internal front, Jiangmen Dongjiang passed ISO 14001 Environmental management, ISO 9001 Quality management and OHSAS 18001 occupational health and safety management system certification, which served as a solid foundation underpinning its sustainable and steady development.

Major pollutant emissions of Jiangmen Dongjiang in 2019 were as follows:

同時,江門東江擁有先進的應急裝備和 應急專業人員,多次獨立完成了各種環 境事故的應急處理,減少了危險化學品 或廢物對周邊環境的污染以及風險。 江門東江秉承集團公司嚴謹的管理 念和高度的環保意識,對外,以先進的 技術及專業的團隊,為各個行業提供 了完善的危險廢物收集、運輸、處理和 處置的整體服務;對內,公司通過了 ISO 14001環境管理、ISO 9001質量管理 及OHSAS 18001職業健康安全管理體系展 提供有力的支持。

2019年度江門東江主要污染物排放如下:

Names of Major Pollutants and Characteristic Pollutants 主要污染物及 特徵污染物的 名稱	Limit of Emissions Concentration (Water: mg/l) 排放濃度限值 (水:mg/L)	Pollutant Emissions Standards Implemented 執行的污染物 排放標準	Total Emissions (ton/year) 排放總量 (噸/年)	Total Ratified Emissions (ton/year) 核定的排放總量 (噸/年)	Monitoring Situation 監測情況
Wastewater: 廢水: COD, NH <sub>3</sub> -N 氨氮	COD: 20 NH <sub>3</sub> -H 氨氮:1	The III type water quality standard of the Environmental Quality Standard for Surface Water (GB 3838-2002) 《地表水環境質量 標準》 (GB 3838-2002) III類水質標準	COD: 0.74 NH <sub>3</sub> -H 氨氮	COD: 3.30 NH <sub>3</sub> -H 氨氮	Qualified 達標

#### 5.1.2 MUNICIPAL WASTE TREATMENT

The municipal solid waste treatment and disposal business are essential for realizing "Building a Beautiful China". The Group's annual treatment capacity for domestic waste, leachate and kitchen waste is approximately 2 million tons, 360,000 tons and 100,000 tons, respectively. The Group also pioneered the treatment model for domestic municipal wastewater by adopting the three-dimensional ecological treatment technology in treating municipal wastewater, and recorded an annual capacity of over 4.5 million tons. As for the domestic waste incineration and power generation integrated project, daily treatment capacity of domestic waste reached 1,000 tons. During the Year, we generated over 158 million kWh of on-grid electricity, which was all converted from waste. The Group's landfill volume amounted to approximately 2.33 million tons, with 26,210 tons of kitchen waste disposed during the Year.

We are committed to promoting the UN Sustainable Development Goal 7 — "Affordable and Clean Energy". In terms of the Group's landfill gas power generation business, there are currently five landfill gas power generation projects, involving total investment of RMB250 million for the construction of Xiaping landfill

gas power generation project, Qingdao Xiaojianxi West landfill gas power generation project, Shenzhen Laohukeng landfill gas power generation project, Hefei Longquanshan domestic waste landfill gas power generation project, and Nanchang Maiyuan garbage disposal site and landfill gas power generation project. The total capacity of five landfill gas power generation plants reaches 24MW, generating more than 160 million kWh of electricity for over 150,000 households throughout the Year.

#### Dongguan Humen Water Co., Ltd.

Founded in June 2006 and operation commenced officially in October 2009, Dongguan Humen Water Co., Ltd. (hereinafter referred to as "Humen Green") is currently a holding sub-subsidiary of Dongjiang Environmental. It has two sewage treatment plants, namely Humen Ningzhou Sewage Treatment Plant Phase I (covering an area of approximately 100,000 square meters) and Humen Haidao Sewage Treatment Plant Phase I (covering the Plant Phase I (2,000 square meters), which are designated to treat municipal wastewater in Humen Town.



為實現「建設美麗中國」, 市政固廢處理 與處置業務正是重要一環。本集團的生 活垃圾年處理能力約200萬噸, 滲濾液的 年處理規模約36萬噸, 餐廚垃圾年處理 能力約10萬噸; 市政污水處理採用立體 生態處理技術, 創新國內市政污水處理 模式, 年處理能力超過4,500萬噸; 至於 生活垃圾焚燒及發電綜合項目,則可處 理每日1,000噸生活垃圾。本年度我們的 上網電量超過15,800萬千瓦時, 轉廢為 能。本年度, 本集團垃圾填埋量約233萬 噸, 餐廚垃圾處理量為26,210噸。

我們致力推動聯合國可 持續發展目標7一「經濟 適用的清潔能源」。本集 團在填埋氣發電業務方 面,我們目前共有5個填 埋氣發電項目,累計投



入2.5億元,先後投資建設下坪垃圾填埋 氣發電項目、青島小澗西垃圾填埋氣發 電項目、深圳老虎坑垃圾填埋氣發電項 目,合肥市龍泉山生活垃圾填埋氣發電項 目,合肥市龍泉山生活垃圾填埋氣發電 工程項目和南昌麥園垃圾處理場填埋氣 發電項目。五個填埋氣電廠的總裝機容 量達24MW,年發電量超過1.6億度,可 供超過15萬戶居民全年使用。

#### 東莞市虎門綠源水務有限公司

東莞市虎門綠源水務有限公司(下稱「虎 門綠源」)成立於2006年6月,2009年10 月正式投產,現為東江環保的控股孫公 司,下屬有兩個污水處理廠,分別為虎 門寧洲污水處理廠一期(佔地面積約10萬 平方米)、虎門海島污水處理廠一期(佔 地面積約1.2萬平方米),專門處理虎門 鎮範圍內的市政污水。

Humen Green obtained the franchise to operate Ningzhou Sewage Treatment Plant and Haidao Sewage Treatment Plant in Humen Town, with a term of 25 years. It is mainly responsible for collecting domestic sewage from the east of Taiping Waterway in Humen Town and domestic sewage from Weiyuan Island in Humen Town, so that the sewage will be purified to meet the quality standard to be discharged into a certain water body or reused. It on average processes more than 100,000 tons of sewage per day and serves a population of about 850,000.

Humen Ningzhou Sewage Treatment Plant and Humen Haidao Sewage Treatment Plant have respectively adopted the improved AAO treatment processes and SBR treatment processes. After being filtered by the coarse grid, the municipal sewage is pumped by the lift pump to the fine grid, and then flows into the grit chamber for sedimentation before entering the biochemical tank. Subsequently, it enters the sedimentation tank for sedimentation, and eventually discharges through the UV disinfection channel in compliance with the discharge standards. The domestic sewage and production wastewater in the plant area are collected by the internal sewage pipeline network of the plant and then converged into the coarse grid to be processed by the treatment facilities together with the external municipal sewage in accordance with relevant standards before discharge. The emissions from the two wastewater treatment plants both meet the requirements of the first class-B graded standard of the Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant (GB 18918-2002) and the first standard of the second period set forth in the Discharge Limits of Water Pollutants (DB 44/26-2001) in Guangdong Province.

Humen Green strengthened its control on production processes by increasing process instruments such as DO, MLSS and ORP for biochemical tank, which boosted the COD removal rate and ensured stable and up-to-standard discharges. The UV disinfection facility at the UV disinfection channel has been replaced, with no changes to operation procedures needed. This replacement not only improved the safety and reliability of the facility, but also allowed it to be more energy-saving and more environmentally-friendly. 虎門綠源取得虎門寧洲污水處理廠和海 島污水處理廠特許運營權,特許經營期 限均為25年。虎門綠源主要負責收集虎 門鎮太平水道以東地區的居民生活污水 和虎門鎮威遠島的生活污水,對污水進 行淨化的過程,使其達到排入某一水體 或再次使用的水質要求,每日平均處理 超過十萬噸污水,服務社區人口約85萬 人。

虎門寧洲污水處理廠及虎門海島污水處 理廠分別採用改良AAO處理工藝及改良 SBR處理工藝,市政污水經粗格柵過濾後 由提升泵送至細格柵,經沉砂池沉澱後 進入生化池,然後進入沉澱池沉澱,再 經紫外消毒渠消毒後達標排放。廠區內 的生活污水和生產廢水經廠區內部污水 管網收集後匯入粗格柵,與外部市政污 水一起經廠內的處理設施處理後達標排 放。兩間污水處理廠的排放均合乎《城鎮 污水處理廠污染物排放標準》(GB 18918-2002)一級B標準與廣東省《水污染物排放 限值》(DB 44/26-2001)第二時段一級標準 的要求。

虎門綠源通過增加生化池DO、MLSS和 ORP等過程儀錶,加強了工藝過程的控制,COD的去除率得到提高,使出水穩 定達標;紫外消毒渠更換了新的紫外消 毒設施,更換後操作過程不變,安全和 可靠程度提高,更加節能環保。



Total emissions from Ningzhou Sewage Treatment Plant ("Ningzhou") and Haidao Sewage Treatment Plant ("Haidao") in Humen Town:

虎門寧洲污水處理廠(「寧洲」)及海島污 水處理廠(「海島」)總排放量:

Types of Pollutants 污染物名稱 COD	Emissions in 2019 (ton) 2019年排放量 (噸) 872.36	Standard Required Emissions (ton/year) 標準要求的 排放量(噸/年) 1,606	Pollutant Discharge Standards Implemented 執行的污染物排放標準 The first standard of the second period set forth in the Discharge	Monitoring Situation 監測情況 Qualified 達標
			Limits of Water Pollutants (DB 44/26-2001) in Guangdong Province 廣東省《水污染物排放限值》 (DB 44/26-2001) 第二時段一級標準	
NH <sub>3</sub> -N 氨氮	29.39	321.2	The first class-B graded standard of the Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant (GB 18918-2002) 《城鎮污水廠污染物排放標準》 (GB 18918-2002) 一級B排放標準	Qualified 達標
Suspended Substances ("SS") 懸浮物(SS)	510.62	803	The first class-B graded standard of the Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant (GB 18918-2002) 《城鎮污水廠污染物排放標準》 (GB 18918-2002) 一級B排放標準	Qualified 達標
Total Nitrogen 總氮	654.23	803	The first class-B graded standard Qualified of the Discharge Standard 達標 of Pollutants for Municipal Wastewater Treatment Plant (GB 18918-2002) 《城鎮污水廠污染物排放標準》 (GB 18918-2002) 一級B排放標準	
Total Phosphorus 總磷	23.02	40.15	The first class-B graded standard of the Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant (GB 18918-2002) 《城鎮污水廠污染物排放標準》 (GB 18918-2002) 一級B排放標準	Qualified 達標

#### Shenzhen Dongjiang Renewable Energy Ltd.

Founded in 2006 and located in the Xiaping solid waste landfill in Luohu District, Shenzhen, Shenzhen Dongjiang Renewable Energy Ltd. (hereinafter referred to as "Renewable Energy") is an integrated resource recycling company that uses landfill gas from domestic waste to generate electricity. It is an enterprise encouraged and supported by China and has been recognized as "Advanced Enterprise in Waste Reduction in Pengcheng" and "Excellent Environmental Protection Demonstration Project in Guangdong Province" for multiple times.

With a site area of 5,404 square meters, the landfill gas power generation project involves a total investment of RMB120 million. It is an integrated resource recycling power plant encouraged and supported by China. Equipped with 10 gas-fired power generators, Renewable Energy has a total installed capacity of 10MW, and becomes a leading landfill gas power plant in China in terms of installed capacity. Operating on a 24-hour around-the-clock schedule, the power grid every day, which is available for 60,000 households in Shenzhen. During the Year, Renewable Energy uses biogas generated from domestic waste landfills to generate electricity with a power generation capacity of 65.17 million kWh. Through turning waste into resources, Renewable Energy has played an important role in Shenzhen's economic development.

Renewable Energy has exercised a stricter control on the emissions of air pollutants in the process of power generation and hence emissions of various pollutants are all in line with the Emissions Limits of Air Pollutants (DB 44/27-2001). It also uses clean energy to generate electricity, with a view to facilitating the control of air pollution.

#### 深圳市東江環保再生能源有限公司

深圳市東江環保再生能源有限公司(下稱 「再生能源公司」)成立於2006年,位於深 圳市羅湖區下坪固體廢棄物填埋場內, 是一家利用生活垃圾填埋沼氣進行發電 的資源綜合再利用型公司,屬於國家鼓 勵和支持型企業,先後多次被評為「鵬城 減廢先進企業」及「廣東省環境保護優秀 示範工程」。

填埋氣體發電項目佔地面積5,404平方 米,總投資1.2億元,屬於國家鼓勵和支 持的資源綜合再利用型電廠。再生能源 電廠配備燃氣發電機組10台,總裝機容 量達10MW,為國內裝機容量最大的填 埋氣發電廠。發電廠全天24小時不間斷 發電,每天向深圳電網提供22萬KWh的 綠色電力,可供深圳市6萬戶居民使用。 本年度,再生能源公司利用生活垃圾填 埋場所產生的沼氣發電,發電量為6,517 萬度電,變廢為寶,為深圳市經濟發展 發揮著重要作用。

再生能源公司發電過程中更嚴格控制 大氣污染物的排放,各項污染物排放均 合乎《大氣污染物排放限值》DB 44/27-2001,使用清潔能源發電,為治理大氣污 染作出貢獻。

Names of Major Pollutants and Characteristic Pollutants 主要污染物及 特徵污染物的 名稱	Emissions (ton/year) 排放量 (噸/年)	Emissions Limits of Standard Requirements (ton/year) 標準要求的排放 限值(噸/年)	Pollutant Discharge Standards Implemented 執行的污染物排放標準	Monitoring Situation 監測情況
NOx	13.29	140	Emissions Standard of Air Pollutants for Thermal Power Plants (GB 13223-2011) 《火電廠大氣污染物排放標準》 (GB 13223-2011)	Qualified 達標
SO <sub>2</sub>	2.86	25.6	Emissions Standard of Air Pollutants for Thermal Power Plants (GB 13223-2011) 《火電廠大氣污染物排放標準》 (GB 13223-2011)	Qualified 達標

#### 5.1.3 ENVIRONMENTAL SERVICES

It is the commitment and pledge of the Group to provide its customers with one-stop integrated environmental services in which we customize environmental engineering services and value-added environmental businesses to suit needs of different enterprises. Environmental engineering and services mainly provide

technical consultation, design, construction and operational management, as well as assessment on environmental impacts and environmental inspection for engineering works of environmental facilities. The Group also specializes in the business of industrial wastewater treatment and provides tailor-made wastewater treatment solutions for various industries with a view to achieving Sustainable Development Goal 6 of the UN: Clean Water and Sanitation — "Ensuring access to water and sanitation for all and maintaining sustainable development", which aims at improving water quality by 2030 through reduction of pollution by way of eliminating waste dumping, minimizing discharge of hazardous chemicals and materials and halving the proportion of untreated wastewater. The Group will continue to provide effective environmental proposals for its customers so as to become a respectable leader in the environmental industry.

#### 5.1.3 環保服務

CLEAN WATER AND SANITATION

6





### Shenzhen Qianhai Dongjiang Environment Technology Service Co., Ltd.

Established on 28 November 2014, Shenzhen Qianhai Dongjiang Environment Technology Service Co., Ltd. (hereinafter referred to as "Qianhai Dongjiang") is a one-stop environmental service provider, offering integrated services comprising technological research and development, engineering design, management, construction, commissioning and operation, as well as manufacturing, installation and after-sales services of environmental equipment and environmental consultation. With extensive practical experiences in the treatment of solid waste, hazardous waste, industrial wastewater and municipal sewage, Qianhai Dongjiang has obtained the Grade B Qualification for Engineering Design (Environmental Engineering) from Department of Housing and Urban-rural Development of Guangdong Province (廣東省 住建廳工程設計乙級資質(環境工程)) and was qualified as a Second-Class Operator of Pollution Control Facilities (Industrial Wastewater and Domestic Wastewater) in Guangdong Province. Qianhai Dongjiang has successfully implemented nearly a hundred industrial wastewater treatment engineering projects as well as large-scale hazardous waste detoxification and resource development projects, and provided wastewater operation services for more than 20 leading enterprises, with 10.7423 million tons of industrial wastewater treated in 2019.

#### 深圳市前海東江環保科技服務有限 公司

深圳市前海東江環保科技服務有限公司 (下稱「前海東江」)成立於2014年11月 28日,是一家集技術研發、工程設計、 管理、施工、調試、運營、環保設備製 造、安裝及售後服務、環境諮詢為一體 的一站式環境服務提供商。前海東江在 固廢、危廢、工業廢水和市政污水處理 方面具有豐富的實踐經驗,擁有廣東省 住建廳工程設計乙級資質(環境工程)、 廣東省污染治理設施運行服務能力評價 二級(工業污水、生活污水);已成功實 施了近百項工業廢水處理工程項目和大 型危廢無害化、資源化建設項目;為20 餘家大型企業提供廢水運營服務,其中 2019年運營工業廢水處理量達1,074.23 萬噸。

#### Case study: Upgrade and transformation project in relation to three-dimensional ecological technology 案例:立體生態技術提標升級改造工程

Qianhai Dongjiang carried out upgrade and transformation projects in various sewage treatment plants, such as Heyuan Southern Sewage Treatment Plant (河源市城南污水處理廠), with a design capacity of 30,000 tons per day, Lianping Domestic Sewage Treatment Plant (連平 縣生活污水處理廠) and Yangxin Second Sewage Treatment Plant (陽新 縣第二污水處理廠), both with a design capacity of 15,000 tons per day, and introduced internationally advanced three-dimensional ecological technology for municipal sewage treatment. The technology introduces aquatic plants to the reactor system to accelerate the metabolism of microorganisms, hence achieving the goal of efficiency enhancement in both energy utilization and treatment performance. It also introduces plant root system-imitated artificial filler and plant root system filler, enabling an increase in biomass of approximately four times in the reactor and an extension of sludge age to around fifty days with increases in the ammonia nitrogen removal rate and the total nitrogen removal rate to over 98% and 90%, respectively. The quality of treated effluent may reach the type III standard of quality effluent under the Environmental Quality Standard for Surface Water (GB 3838-2002), at the same time creating beautiful scenery and achieving satisfactory deodorizing effect.

前海東江為多個污水處理廠作提標升 級改造工程,如河源市城南污水處理廠 (設計規模:30,000噸/日),連平縣生 活污水處理廠(設計規模:15,000噸/ 日),陽新縣第二污水處理廠(設計規 模:15,000噸/日)等,引進國際先進 的立體生態技術作市政污水處理。該技 術於反應系統內引入水生植物,加速微 生物的新陳代謝,實現提高能源使用效 率和提高處理效果的提效目的;並引 入仿植物根系人工填料和植物根系填 料,使反應器內生物量提高約四倍,污 泥齡將延長約五十天,提高氨氮去除率 至大於98%,總氮去除率大於90%,處 理出水水質可達到《地表水環境質量標 準》(GB 3838-2002)III類標準的優質出水 水質,同時達致優美的景觀和理想的除 臭效果。



Qianhai Dongjiang attaches great importance to research and development and introduction of new processes in sewage treatment and new technologies for environmental engineering construction. For the contracted and operating industrial wastewater projects, the adoption of a self-developed new process of "Breaking reactor + Bioreactor" electroplating and circuit board wastewater treatment or MBST combined treatment process can effectively remove hazardous pollutants in electroplating and circuit board wastewater. The finally discharged sewage satisfies the V type standard of the Environmental Quality Standard for Surface Water (GB 3838-2002) at a wastewater recycle rate of more than 60%.

前海東江特別重視污水處理新工藝及環 保工程建設新技術的研發和引進工作。 在承建與運營的工業廢水工程項目中, 採用公司自主研發的「破絡反應器+生物 反應器」電鍍與線路板廢水處理新工藝, 或MBST組合處理工藝,可有效去除電鍍 與線路板廢水中的有害污染物,最終排 放廢水達到《地表水環境質量標準》(GB 3838-2002)V類標準,廢水回用率可達到 60%以上。
Qianhai Dongjiang, which conducts industrial wastewater treatment for various companies in the electroplating and circuit board industry, has successfully overcome numerous technical barriers and developed four innovations in wastewater treatment.

- COD and total phosphorus pollutants are reduced, ensuring stable quality of wastewater discharge;
- sludge water membrane separation treatment process is not affected by the fluctuation of influent water quality;
- the maximum use efficiency of solution is ensured with a small and recyclable dosage of solution; and
- fully automated control is achieved with a small volume of sludge and simple operation.

#### **5.2 MANAGEMENT OF CARBON EMISSIONS**

As a pioneer among the environmental enterprises in China, the Group deeply understands the urgency of climate change, which has aroused global concerns, apart from its efforts in addressing the hazardous waste issues and municipal waste treatment. With a view to stopping the development of global warming, the Group



continued to promote the Sustainable Development Goal 13 of the UN: Climate Action — "Take Urgent Action to Combat Climate Change and its Impacts" during 2019. We are committed to energy conservation and carbon reduction in our daily operations in order to practise environmental protection in every detail across our operations.

In order to facilitate the Chinese government to fulfil its commitment under the Paris Agreement and implement major policies in relation to climate change, including the National Plans for Addressing Climate Change (2014–2020) (《國家應對氣候變化規劃(2014–2020年)》) and the National Strategy on Adaptation to Climate Change (《國家 適應氣候變化戰略》), the Group expects to assist in mitigating the crisis of climate change by operating low-carbon businesses. Our GHG emissions are calculated in accordance with ISO 14064-1 established by International Organization for Standardization and the Greenhouse Gas Protocol developed by World Resources Institute and World Business Council for Sustainable Development. The GHG emissions summary of the headquarters office building and five major subsidiaries for the Year is set out in Appendix I: Sustainability Data Statements. 前海東江為多家電鍍及線路板行業的公 司處理工業廢水,更成功突破多項技術 關卡,在廢水處理上發展出四個創新點。

- 降減COD和總磷污染物,保障廢水 排放的穩定達標;
- 泥水膜分離處理工藝不受進水水質 波動影響;
- 加藥量小,可循環使用,保證藥品
   的最大使用效率;及
- 污泥量小,操作簡單,完全實現自動化控制。

#### 5.2 碳排放管理

本集團作為國家環保企 業的先驅,除了解決商 問題和處理市政廢物,亦深切了解全球問 受關注的氣候變化問題 的迫切性。為遏止全球



暖化之趨勢,2019年度本集團繼續推動聯合國可持續發展目標13:氣候行動 一「採取緊急行動應對氣候變化及其影響」,我們在日常運營上致力節能減碳, 讓環境保護貫徹在每一個運營細節當中。

為協助國家實踐《巴黎協議》的承諾及落 實《國家應對氣候變化規劃(2014-2020 年)》和《國家適應氣候變化戰略》等主要 氣候變化相關政策,本集團期望能透過 低碳業務運營來協助減緩氣候變化的危 機。我們的溫室氣體排放是根據國際標 準化組織的ISO 14064-1及世界資源研究 所與世界可持續發展工商理事會開發的 《溫室氣體盤查議定書》計算,本年度, 總部辦公大樓及五家主要子公司的溫室 氣體排放概要載列於附錄一:可持續發 展數據摘要。

GHG emissions of the Group can be categorized into direct emissions (Scope 1) and indirect emissions (Scope 2). The GHG emissions in each scope are derived from the fuel consumption by the fixed equipment of the Group, the fuel consumed by its vehicles and refrigerants (Scope 1) and electricity consumption during its operation (Scope 2), respectively.

The Group actively implements energy saving and emissions reduction measures in its core businesses. The total volume of GHG emissions (Scopes 1 and 2) in 2019 within the designated scope of data was 45,118.48 tonnes of  $CO_2e$ . This report reflects the carbon emissions at the Group level as disclosed by the Group. The scope of disclosure included the headquarters office building and the major subsidiaries engaging in our four core businesses and thus demonstrates the results achieved in terms of carbon reduction by the Group across various businesses.

#### **5.3 GREEN OPERATION**

Adhering to the concept of "A World without Waste", the Group is committed to improving the operating and processing procedures of each plant, with a view to implementing energy conservation and emissions reduction in the process of waste disposal works. All the major subsidiaries of the Group have devoted persistent efforts to promote green production in various aspects such as alternative materials, equipment advancement, production process improvement, waste recycling and employee management, in order to reduce carbon emissions, minimize environmental pollution and conserve natural resources. 本集團的溫室氣體排放可分為直接排放 (範圍1)及間接排放(範圍2)。各範圍內 的溫室氣體排放分別來自本集團固定設 備的燃料消耗、車輛燃油消耗及製冷劑 (範圍1)及運營時的電力消耗(範圍2)。

本集團在核心業務中積極採取節能減排 措拖,2019年數據範圍內的溫室氣體排 放總量(範圍1及2)為45,118.48公噸二氧 化碳當量。此報告反映本集團披露集團 層面的碳排放,披露的範圍亦已包括總 部辦公大樓及四個核心業務的主要子公 司,顯明本集團在各種不同業務上的減 碳成果。

#### 5.3 綠色運營

本集團堅守「讓世界沒有垃圾」的理念, 致力優化各個廠房的運作和處理流程, 務求令節能減排實施在廢物處理的工 作之中。本集團各主要子公司在替代材 料、設備改進、改善生產過程、廢棄物 循環再用、員工管理等多方面,持續致 力推動綠色生產,力求減少碳排放、減 少環境污染和節約天然資源。

Green Production Solutions 綠色生產方案					
Energy Saving 節能		Water Saving 節水			
•	Replace oil-fired boilers with oil and gas dual- purpose boilers, so that natural gas can be used in production processes for reducing carbon emissions 以油氣兩用鍋爐取代燃油鍋爐,令生產過程可利 用天然氣減少碳排放	•	Using recycled wash water 循環使用物料洗滌水		
•	Replace high-energy lamps with energy-saving LED lighting 以節能型LED照明取代高耗能燈具	•	Replace the inclined plate sedimentation tank with MBR membrane to improve wastewater treatment capacity 用MBR膜替代斜板沉澱池,提高廢水處理能力		
•	Flue waste heat recovery 煙道餘熱循環再用	•	Condensate water for recycling and reuse 冷凝水循環再用		
•	Introducing variable frequency power equipment 引進變頻動力裝置	•	Improve physical and chemical wastewater treatment programs 提升物理性及化學性污水處理程序		
•	Monitor plant power consumption daily 每日監察廠房用電量	•	Monitor plant water consumption daily 每日監察廠房用水量		
•	Implement departmental energy conservation incentive programs to encourage competition among departments for energy efficiency performance 實行部門節能獎勵計劃,鼓勵部門間在節能表現 上競爭	•	Reuse wastewater with high ammonia nitrogen and distilled water 高氨氮廢水蒸餾水回用		



#### **Recycling of Hazardous Waste — Zhuhai Yongxingsheng**

Packaging materials used to contain hazardous waste were originally processed in incinerator for minimization before sending to landfill. In consideration of energy conservation and emissions reduction, Zhuhai Yongxingsheng has replaced the original incineration process with recycling. Packaging materials for hazardous waste, such as 200L plastic barrels, 25L plastic barrels and ink tanks, are uncapped and initially sheared before being crushed in the bucket crusher. Subsequently, they are washed in a circulating water flume and converted into recyclable colloidal particles upon centrifugal dewatering.

Results: Resources saving has been achieved by turning plastic barrels, iron drums and other packaging materials into chemical raw materials and materials through washing, crushing and recycling. This measure not only releases the capacity of incinerator, but also cuts down exhaust emissions from incineration and reduces secondary hazardous waste landfill.

#### 危廢資源化 — 珠海永興盛

盛裝過危廢的包裝物原有處置方式是進 焚燒爐減量化後填埋,考慮到節能減排 因素,珠海永興盛把原先工藝由焚燒轉 變為資源化。我們把200L膠桶、25L膠 桶和油墨罐等危廢包裝物經開蓋和初步 剪切後,進入小桶破碎機破碎後進入循 環水槽清洗,離心脱水後成為可資源化 的膠粒。

成果:膠桶和鐵桶包裝物通過清洗和破碎,資源回收利用後重新成為化工原料和材料,達致資源節約。此措施能釋放焚燒爐產能,減少焚燒過程中生成的廢氣排放和二次危廢填埋。

# Achievements of Green Technology Innovations — Zhuhai Yongxingsheng

#### Physicochemical treatment of mother liquor:

Original problem: Mother liquor generated from evaporator in physicochemical workshop contains relatively higher COD value, salinity and ammonia nitrogen content, which will pose great pressure on production without a mature treatment technique.

Solution: In order to tackle this difficulty in treatment of mother liquor, we have worked out a set of new treatment technique that focuses on treating waste with waste. This low-cost technique achieves expected treatment effect by neutralization of waste alkaline water and waste acid water generated mainly by clients and in-house operation. As such, degradation rates for COD value and salinity amounted to 30–35% and 35–40%, respectively.

#### Reduction of slag through physicochemical process:

Original problem: In the regular pre-treatment physicochemical process, the collection and transportation volume of waste acid water is well above that of waste alkaline water. As a result, a large quantity of lime is required for pH-regulation, which has led to a large amount of brine sludge being generated from the physicochemical production line and most probably scaling and tube blocking in the evaporators. Besides, it generally incurs high processing cost.

Solution: In order to tackle this production difficulty, the internally collected and transported waste alkaline water is used to replace lime in pH regulation of waste acid water, which has reduced the amount of brine sludge generated and minimized the frequency of scaling in the evaporator, thereby enhancing production efficiency and reducing energy consumption.

#### 創新綠色技術成果 — 珠海永興盛

#### 物化母液處理:

原先問題:物化車間蒸發器產生的母液 COD值、鹽分、氨氮含量較高,若無成 熟的處理方法,給生產帶來很大壓力。

解決方案:為了解決母液處理難題, 我們研究出一套新型處置方法,核心 是以廢制廢,主要通過客戶、內部產生 的廢鹼水及廢酸水中和處理,達到預 計處置效果,而且成本低廉。其中, COD值降解率達30-35%,鹽分降解率 達35-40%。

#### 物化降渣:

原先問題:常規物化預處理工藝中,因 廢酸收運量遠遠大於廢鹼水收運量,需 要使用大量石灰進行pH調節,導致物化 生產線產生大量鹽泥且容易造成蒸發器 結垢堵管,處理成本高。

解決方案:為了解決該生產難題,採用 內部及收運廢鹼水代替石灰與廢酸進行 pH調節,降低鹽泥產量且能夠降低蒸 發器結垢頻率,提高生產效率,降低能 耗。



In addition to core business, the Group also encourages all of its staff to participate in the implementation of energy conservation and emissions reduction in the office and daily operation. For data of energy consumption, water consumption and waste for the Year, please refer to Appendix I: Sustainability Data Statements. In addition, there is no issue in sourcing water that is fit for purpose. 除了核心業務,本集團亦鼓勵全體員工 的參與,讓每一位員工在辦公室和日常 運營中落實節能減排。本年度的能源及 水消耗量,以及廢棄物數據請參閲附錄 一:可持續發展數據摘要。此外,我們 在獲取適當水源上沒有任何問題。

Energy Saving 節約能源				
Solar Energy Generation 太陽能發電	Office Lighting Management 辦公室照明管理			
<ul> <li>Solar photovoltaic power generation equipment was installed in the office building to reduce electricity consumption of the building 辦公大樓加裝太陽能光伏發電裝置,節省大樓用電量</li> </ul>	<ul> <li>Install dynamic sensor switch 安裝動態感應開關</li> <li>Divide the lighting area 劃分照明區域</li> <li>Switch to LED lamps 轉用LED燈具</li> <li>Post prominent power-saving tips 張貼明顯節電提示</li> <li>Increase the number of luminaire cleanings 增加燈具清潔次數</li> </ul>			
Efficient Air Conditioning Management 高效空調管理	Office Equipment Management 辦公室設備管理			
<ul> <li>The temperature is preset to 26 degrees Celsius 溫度默認為攝氏26度</li> <li>Clean the dust net regularly 定期清洗隔塵網</li> <li>Close door and window gaps to reduce cold air loss 加密門窗縫隙以減少冷氣流失</li> <li>Adopt central control and monitoring systems or building management systems 採用中央控制及監察系統或樓宇管理系統</li> <li>Allow employees to go to work in casual attire on Friday 容許員工於星期五以便服上班</li> <li>Add reminders to remind employees to turn off air conditioners at the right time 加設提示提醒員工適時關掉空調</li> </ul>	<ul> <li>Monthly monitoring of office electricity consumption 每月監察辦公室用電量</li> <li>Set the automatic standby mode for computers 為計算機設定自動待機模式</li> <li>Fully shut down electronic devices during non-office hours 非辦公時間全面關閉電子設備</li> <li>Integrate servers to reduce energy consumption 整合服務器減少耗能</li> <li>Replace single printers or photocopiers with energy- efficient and multifunction printers 以高能源效益的多功能打印機取代 單一打印機或複印機</li> </ul>			

#### Energy Saving 節約能源

#### Green Travel 綠色出行

- Regular inspection of tires for the fleet 為車隊定期檢查胎氣
- Provide low-carbon driving training for drivers 為司機提供低碳駕駛培訓
- Implementation of switching off idling engines
   落實停車熄匙
- Reduce the number of business meetings by replacing with video and teleconferencing 以視頻、電話會議減少公幹會面
- Improve vehicle scheduling and encourage employees along similar route to share the same vehicle 增強車輛調度安排,鼓勵員工相近路線合用車輛
- Implement the Company Vehicles Management System and the Administrative Vehicles Management Requirements to achieve standardized management of company vehicles and ensure reasonable scheduling and utilization of vehicles 實施《公務用車管理制度》及《行政車輛管理規定》,實現公司車輛規範管理,確保車輛合理 安排及使用

Reduce Consumption of Natural Resources 減低耗用天然資源					
Save Paper 節約用紙	Management of Water Resources 水資源管理				
<ul> <li>Receive faxes by email 以電郵接收傳真</li> <li>Print with recycled papers where feasible 可行情況下,利用回收紙打印</li> <li>Purchasing recycled paper 採購再造紙</li> <li>The office administrative system is completely paperless and the programs are processed electronically 辦公室行政系統全面無紙化,以電子系統處理各 程序</li> <li>Install a hand dryer 安裝幹手機</li> <li>Switch to e-card 轉用電子賀卡</li> <li>Regularly count paper usage and monitor print quantity of users 定期統計用紙量及監察使用者打印數量</li> </ul>	<ul> <li>Speed up the maintenance of dripping faucets 加快維修滴水水龍頭</li> <li>Reduce water pressure to reduce water flow 調低水壓減少水流量</li> <li>Regular water pipe leak test 定期進行水管滲漏測試</li> <li>Fully use water-saving label sanitary ware 全面採用節水標籤之潔具</li> <li>Using infrared faucet 採用紅外線水龍頭</li> <li>Put up prominent water-saving tips 張貼明顯節水提示</li> </ul>				
Comprehensive Waste Reduction 全面減廢					

• Set up an independent plastic recycling machine to provide incentives to increase recovery rate 設立獨立膠樽回收機,提供獎勵增加回收率

- Provide classified recycling bins and battery recycling boxes for employees 提供分類回收筒及電池回收箱予員工使用
- Reuse all kinds of stationery supplies 重複使用各類文儀用品
- Use rechargeable batteries 使用充電電芯



In order to implement the strict and standardized operating and management system, in August 2018, the Group passed the revised certification of Occupational Health Assessment Series (OHSAS 18001) and Environmental Management System (ISO 14001), which not only demonstrated our concerns for employees' health and safety, but also contributed to optimizing our environmental management system, and thus realizing energy conservation, reducing impacts on the environment and achieving continuous environmental improvement.

<image><image><image><section-header>

Certificate of OHSAS 18001 series OHSAS 18001體系證書

In addition, the Group carries out responsible supply chain management, promotes anti-corruption, protects intellectual property rights, safeguards information security and customer's privacy, at the same time strives to provide customers with quality services. We have formulated a series of relevant policies and institutional documents, so as to realize compliant operation by standardizing management, while providing high quality products and services for customers.

為落實嚴格規範的運營管理體系,本 集團在2018年8月通過了職業健康管 理體系(OHSAS 18001)和環境管理體系 (ISO 14001)的換版認證,不僅顯示我們 對員工健康與安全的關注,也完善優化 了我們的環境管理系統,節約資源,減 少對環境的影響,持續改善環境。



#### Certificate of ISO 14001 series ISO 14001體系證書

此外,本集團進行負責任的供應鏈管 理,推動反腐倡廉建設,維護知識產 權,保障信息安全和客戶隱私,並竭力 為客戶提供優質服務。我們已制定了一 系列相關的政策和制度文件,務求規範 管理以達致合規運營,同時,為客戶提 供高質量的產品和服務。



# 6.1 SAFETY, ENVIRONMENTAL AND QUALITY MANAGEMENT

In accordance with the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases, the Quality Management System Requirements (GB/T 19001-2016), the Environmental Management System Requirements and User Guidelines (GB/T 24001-2016), the Occupational Health and Safety Management System Regulations (GB/T 28001-2011) and other laws and regulations and national standards, Dongjiang Environmental has conducted safety, environmental and quality management by incorporating the demands for safety management, environmental protection and quality control, and developing various institutional documents and regulations relating to safety, environmental and guality management, including the "Quality, Environmental and Occupational Health and Safety Management Handbook" (《質量、環境、職業健康安全管理手冊》), the "Management Regulations on Safety and Environmental Protection Inspection"(《安全 環保檢查管理規定》) and the "Three Simultaneities Management System of Safety and Environmental Protection" (《安全環保三同時管理制度》). These regulations can govern that safety, environmental and quality management work is implemented on a highly effective basis.

In order to guarantee safety and environmental performance of the projects, the Group strictly complied with Production Safety Law of the People's Republic of China, Environmental Protection Law of the People's Republic of China and other laws and regulations. Besides developing its management systems, the Group also improved its management structure in respect of safety and environmental protection. Accordingly, the Group has established a safety and environmental protection management committee, with the chairman and the chief executive officer serving as the director and the deputy director, respectively. Departments specializing in safety and environmental protection management are set up at the headquarters and various business departments of the Group. Enterprises engaging in treatment and disposal of hazardous waste and dangerous goods transportation as well as other key enterprises are required to set up an independent safety and environmental protection department, and designate professional management personnel of safety and environmental protection to supervise and inspect the safety and environmental performance of each project.

#### 6.1 安全環境質量管理

為貫徹落實安全、環境及質量管理,東 江環保根據《中華人民共和國職業病防治 法》、《質量管理體系要求》(GB/T 19001-2016)、《環境管理體系要求及使用指南》 (GB/T 24001-2016)和《職業健康安全管理 體系規範》(GB/T 28001-2011)等法律法規 和國家標準,結合安全管理、環境保護 和質量控制的需要,制定多個有關安全 環境質量管理的制度文件和規定,如《質 量、環境、職業健康安全管理手冊》、 《安全環保檢查管理規定》、《安全環保三 同時管理制度》等,監管安全、環境及質 量管理工作高度確實執行。





We shall make sure that the "Three Simultaneous" safety and environmental protection system is strictly implemented in all the new, rebuilding and expansion construction projects, that the pollutant discharge permit, the hazardous waste business license and the filing certificate for environmental emergency preparedness plan have been obtained. We carry out relevant activities in compliance with the approved requirements.

We comprehensively conduct the identification of hidden safety hazards by setting up risk points, a list of sources of danger, a list of major hidden hazards and a list of hidden hazards inspection and rectification to develop dual prevention mechanism for removal of hidden hazards. In order to strengthen safety and environmental protection risks management and control, the management of safety and environmental protection department at the headquarters has intensified daily management and supervision and asked each unit to submit the safety and environmental protection monthly report once a month, then an analysis result based on such report will be submitted to the Group's management. In addition, the safety and environmental protection department at the headquarters organizes the management of safety and environmental protection department of each unit to participate in the meeting convened once a month. At the meeting, newly launched regulations, requirements for the Group's safety and environmental protection management, sound management practices and cutting-edge safety and environmental protection technologies will be promoted to enhance the safety and environmental protection management.

Every year, we conduct various special inspection campaigns for safety and environmental protection, such as major safety and environmental protection inspections, safety inspection in key areas, cross inspection, fire safety inspection, safety inspection for hazardous chemicals, etc. In the campaign for cross inspection, safety and environmental protection department at the headquarters will send a number of cross inspection panels to conduct cross inspection on major enterprises or projects spread all over the country. In case of any hidden hazards identified, such unit(s) shall be required to make rectification according to the "four designated (四定)" principle, namely designated personnel in charge, designated rectification period, designated rectification measures and designated investment in rectification, so as to reinforce the management measures for safety and environmental protection. 我們確保所有新建、改建、擴建工程項 目嚴格落實安全環保「三同時」制度, 並取得排污許可證、危險廢物經營許可 證、環境突發事件應急預案備案證明, 並遵照核准要求運營相關活動。

我們每年都會進行各類專項安環檢查 行動,如安全環保大檢查、重點領域安 全檢查、交叉檢查、消防檢查、危險化 學品安全檢查等。在交叉檢查活動中, 由總部安環部組織多個交叉檢查小組到 全國各地的主要企業或項目進行交叉檢 查,若發現隱患,會要求相關單位按「四 定」(定責任人、定整改期限、定整改措 施、定整改投入)進行整改,以加強安全 環保管理措施。

For the sake of propelling standardization and information construction of the Group's safety and environmental protection management, during the Year, we have independently developed "Ping'an Dongjiang (平安 東江)", an intelligent safety and environmental protection management platform which has currently been thoroughly launched and put into service in all units. The system platform comprises 13 management functions including safety and environmental protection records management on the basis of a set of records for each enterprise, safety and environmental protection inspection, hidden hazards rectification, management of hazardous operations, safety and environmental protection trainings, environmental inspection, drills for emergency rescue, etc. By integrating the Internet of Things, AI, the mobile Internet, big data analysis and other information technologies, it is able to make rapid and accurate intelligent response in the Group's key works such as safety, production, environmental protection and contingency management, thus comprehensively boosting the Group's risk-prevention capacity and risk supervision capabilities.

為促進本集團安全環保管理的標準化和 信息化建設,我們於本年度自主開發 「平安東江」智慧安環管理平台,目前 系統平台已在各單位全面推行環構 家統平台包括:一企一檔安環檔 理、安環培訓、環保檢測、應急救 長 線等13個管理模塊,結合物聯網、AI、 移動互聯網、大數據分析等信息放為 不 集團的安全、生產、環保、應 智 工作做出快速、應給 的 範 能力與 監管水平。





The Group will regularly check and evaluate the implementation of the objectives, targets and management plans of each department. During the Year, we have prepared the "Appraisal of the Safety and Environmental Protection Works of Dongjiang Environmental for the Year 2019" (《東江環保2019年度安全環保工作考核表》) to assess the performance of each unit in conducting safety and environmental protection works. The Group will also take timely measures on the problems found or make necessary adjustments to ensure that the objectives and management plans are implemented as scheduled. The results of the assessment are reported for record, so that safety and environmental protection can be put into practice in the entire business.

本集團並會定期對各部門目標、指標和 管理方案的執行情況進行檢查和考核, 本年度,我們設有《東江環保2019年度安 全環保工作考核表》,考核各單位安全環 保工作表現,對所發現的問題及時採取 措施,或進行必要的調整,以確保目標 和管理方案按計劃進度實施完成,並將 考核結果上報紀錄在案,讓安全環保貫 徹整個業務。



Furthermore, to ensure the quality of products and services, we have implemented a comprehensive strategy of quality management by establishing the ISO 9001 quality management system that covers all business presence of the Group and extends to its suppliers and the client side. Adhering to the principle of "achieving high quality in production and service" and by developing the three-inspection (namely self-inspection, mutual inspection and special inspection) management, pre-job management and equipment management systems, we have enhanced the quality of our products and services. Our quality and technology department conducts quality inspection and verification on finished products according to related technology standards and documents to make sure that the finished products are in full compliance with the quality and technical requirements for products, while enforcing strict delivery management.

In case of any problems identified in the course of the operation of quality management system through regular or irregular audit, we will take rectification and prevention measures in a timely manner to ensure the suitability and effectiveness of the quality management system. We have a complete quality control and measurement system in place. It is designed to continuously improve quality through the supervision over the operating effectiveness of the quality management system, thereby satisfying increasingly more demands from the clients.

#### 6.2 RESPONSIBLE SUPPLIER MANAGEMENT

A sound supplier management system is indispensable to make sure the sustainability of the Group's supply chain. In strict compliance with relevant regulations such as the "Government Procurement Law of the PRC" (《中華人民共和國政府採購法》), the "Implementation Regulations of the Government Procurement Law of the PRC" (《中華 人民共和國政府採購法實施條例》), etc. and by developing systems and regulations including the "Supplier Management System" (《供應商管 理制度》), the "Procurement Management System" (《採購管理制度》), the "Centralized Procurement Management Regulations" (《集中採購管 理規定》) and the "Contract Evaluation Management Program" (《合 同評審管理程序》), we intend to standardize supplier management and establish a management program for each construction, equipment and bulk purchase, so as to ensure the quality and standard of suppliers while improving the supplier system.

In order to conduct centralized management of the Group's procurement operation scattered throughout the country, we have established a standardized supplier list that fully records the suppliers' information, supply records and evaluation outcome to prevent various drawbacks in the procurement process and enhance the efforts in anti-corruption. 此外,為保證產品和服務的質量,我們 實施全面的質量管理戰略,建立了覆蓋 本集團全部業務領域,並向供應商和客 戶端延伸的ISO 9001質量管理體系。我 們以「質量通過生產和服務過程來實現」 為原則,通過建立三檢管理、上崗管理 和設備管理制度,提升我們的產品和服 務質量。我們的質量技術部根據相關技 術標準和文件,對最終產品進行質量檢 衝襲證,確認成品完全符合產品質量技 術要求,並進行嚴格的出貨管理。

我們通過定期或不定期的審核,若在質 量管理體系運行過程中發現問題,會及 時糾正和預防,保證質量管理體系的適 宜性和有效性。我們建立了完整的質量 監控和測量系統,通過對質量管理體系 運行結果的監控,持續改進質量,以滿 足不斷提高的客戶需求。

#### 6.2 負責任供應商管理

為確保本集團可持續發展的供應鏈,健 全的供應商管理不可或缺,我們嚴守《中 華人民共和國政府採購法》、《中華人民 共和國政府採購法實施條例》等相關法 規,制定《供應商管理制度》、《採購管理 制度》、《集中採購管理規定》、《合同評 審管理程序》等制度及規定,以規範供應 商管理,並建立各項工程、設備及大宗 採購管理程序,保障供應商的質量和水 平,完善供應商體系。

為集中管理本集團分散於在全國各地的 採購業務工作,我們已設立統一的供應 商名錄,全面紀錄供應商的資料、供應 紀錄及考核情況等,以防止採購程序中 的各種流弊,強化反貪倡廉的工作。

In the supplier selection process and regular assessment, in addition to assessing factors such as the quality of products and services provided by potential suppliers, production or supply capacity, etc., the Group will also include legal and compliant operation, occupational health and safety management, ethics and environmental standards into the criteria of assessment, in a bid to urge the suppliers to perform their social responsibilities and enable them to achieve a sustainable supply chain through joint efforts with us.

For new process technologies, complex process technologies or largescale project construction projects, relevant departments or technical departments shall provide new suppliers that can fulfill the technical process requirements. The procurement department shall carry out inspection and review as required. For bulk procurement projects, the Group will conduct on-site inspection for the newly developed suppliers by relevant departments including procurement, technology, process, equipment, workshop and finance to ensure high-quality procurement as well as fair and impartial procurement procedures.

During the Year, we have an aggregate of 1,378 suppliers spreading all over the country to provide us with products and services such as design service and consultation, equipment, construction, consumables, accessories, technology, etc. 在選擇供應商過程及定期考核中,本集 團除了評核潛在供應商提供的產品及服 務質量、商譽、生產或供貨能力等因素 外,亦將合法合規運營、職業健康安全 管理、道德及環保標準等納入考核標準 之中,以推動供應商履行社會責任,使 供應商與我們在共同努力下,實現可持 續供應鏈。

關於新工藝技術、工藝技術複雜或大型 工程建設項目等,相關部門或技術部門 需要提供滿足技術工藝要求的新供應 商,由採購部門按照要求進行考察和評 審。對於大宗採購項目,本集團將由採 購、技術、工藝、設備、車間、財務等 相關部門共同對新開發的供應商進行現 場考察,確保採購的高質量及採購程序 的公平公正。

本年度,我們在全國共有1,378個供應 商,為我們提供設計服務諮詢、設備、 施工、耗材、輔料及技術等服務及產品。





#### **6.3 ANTI-CORRUPTION**

With the core corporate culture of "Be a Sincere Person, Do Things with Integrity, Communicate Honestly", the Group immensely pursues the building of a clean party and anti-corruption practices and strictly abides by national and local laws and regulations on anti-corruption and bribery, which include the Anti-Money Laundering Law of the People's Republic of China, the Company Law of the People's Republic of China and the Anti-Money Laundering and Counter-Terrorist Financing (Amendment) Ordinance of Hong Kong. The Group has formulated the "Anti-corruption Management System" (《反舞弊管理制度》), which strictly provides that the professional conduct of the management and employees of the Group shall be subject to relevant anti-corruption laws and regulations, professional ethics and internal control system to prevent any fraudulence such as corruption, bribery and fraud that may harm the interests of the Group and shareholders. We have established a discipline inspection supervisory office during the Year and formulated reporting procedures to provide various reporting channels for employees of the Group and related external parties, such as emails, telephones and letters, and keep the identity of whistleblowers who report under their real names strictly confidential. We will investigate and deal with improper behavior or violations according to the regulations and laws.

During the Year, the Group had no incidents of corruption, bribery, extortion, fraud and money laundering.

#### 6.3 反腐倡廉建設

秉持「誠懇做人、誠信做事、坦誠溝通」 的企業核心文化,本集團高度奉行黨風 廉政和反腐敗建設,我們嚴格遵守國家 及地方與反貪污賄賂相關的法律法規, 包括《中華人民共和國反洗錢法》、《中 華人民共和國公司法》、香港的《打擊洗 錢及恐怖分子資金籌集(修訂)條例》等。 本集團訂立了《反舞弊管理制度》,嚴格 規範本集團的管理層及員工的職業行 為必須遵守相關反舞弊法律法規、職業 道德及內部控制制度,防止一切貪污、 賄賂、欺詐等舞弊行為損害本集團和股 東的利益。我們已於本年度設立紀檢監 察室,制定舉報程序,為本集團僱員及 相關外部人士提供多個舉報方式,如電 郵、電話、來信,並對實名舉報者身份 嚴格保密。我們按照規定進行調查和處 理相關不當或違紀違法等行為。

本 年 度 , 本 集 團 沒 有 發 生 任 何 有 關 貪 污 、 賄賂 、 勒索 、 欺詐 及 洗 黑 錢 的 案 件 。



#### 6.4 RESPECTING THE INTELLECTUAL PROPERTY RIGHTS

As an environmental service provider focusing on innovation and research and development, the Group respects intellectual property rights and strictly abides by the Law on Intellectual Property Rights of the People's Republic of China, the Patent Law of the People's Republic of China, the Copyright Law of the People's Republic of China and other relevant laws to protect the legal rights of intellectual property rights of the Group and related parties.

#### Intellectual Property Management System Certification 如逆喜塘管理體玄詞談

#### 知識產權管理體系認證

The Group has obtained the intellectual property management system certification (GB/T 29490-2013) in September 2017. The scope of certification includes the research and development, sales and management of intellectual property rights of procurement in relation to the processes of:

- Environmental metal salt products;
- Waste disposal and comprehensive utilization technology;
- Industrial wastewater treatment technology;
- Municipal sludge treatment technology;
- Hazardous waste treatment and disposal technology;
- Domestic waste treatment and recycling technology; and
- Food waste treatment and recycling technologies.

本集團已於2017年9月獲得知識產權管理體系認證(GB/T 294902013),通過認證範圍包括:

- 環保金屬鹽產品;
- 廢物處置及綜合利用技術;
- 工業廢水處理技術;
- 市政污泥處理技術;
- 危險廢物處理處置技術;
- 生活垃圾處理及資源化技術;及
- 餐廚垃圾處理及資源化技術的研發、銷售、過程相 關採購的知識產權管理。

#### 6.4 尊重知識產權

作為注重創新研發的環保服務供應商, 本集團尊重知識產權,並嚴格遵守《中華 人民共和國知識產權法》、《中華人民共 和國專利法》、《中華人民共和國著作權 法》及其他相關法律,以保障本集團和相 關人士的知識產權合法權利。



We have formulated the "Management Regulations for Technological Achievements" (《技術成果管理規定》) to protect our technological achievements, including patents, trademarks, standards, scientific research papers and articles, registration and appraisal of scientific and technological achievements, which are coordinated and managed by Dongjiang Environmental Research Institute. In order to encourage active innovation and research and development of the Group's research and development personnel, we will award bonuses to research and development personnel according to the type of different patents if authorization has been obtained for the employee's invention patent.

The Group strictly regulates the servers and installation of desktop terminal operating system and application service software, and the illegal use of third-party intellectual property rights is strictly prohibited. We require suppliers or customers to protect the legal rights of the Group or related parties in accordance with the laws. We also require our cooperative suppliers to ensure that all technological and development achievements submitted shall not infringe any legal rights such as legal patent rights, trademark rights and copyrights of any third party. In the event of violation by a supplier, the Group will consider terminating the cooperation with it.

#### 6.5 MAINTAINING THE INFORMATION SECURITY

The Group attaches great importance to securing information security and customer privacy, and strictly abides by the relevant laws and regulations regarding information security and privacy protection, including the Administrative Measures for the Security Protection of Computer Information Networks with International Connections. We have formulated the "IT Security Management Regulations" (《IT安全管 理規定》) to strengthen the security and confidentiality management of computers and information systems of the Group, including confidential information systems and non-confidential information systems, to ensure the security of business data and business information of the Group. Key information security management measures include data center security management, network and low-voltage system security management, data security management, terminal and virus security management.

我們制定了《技術成果管理規定》,致 力維護技術成果,包括專利、商標、標 準、科技論文與著作、科技成果登記與 鑒定等,並由東江環保研究院統籌管 理。為激勵本集團研發人員積極創新研 發,如職務發明專利獲得授權,我們會 根據不同專利的類型對研發人員發放獎 金以作獎勵。

本集團嚴格監管服務器及桌面終端的操 作系統、應用服務軟件的安裝,嚴禁非 法使用第三方的知識產權。我們規定供 應商或客戶依法保護本集團或相關人士 的合法權利。我們亦要求與我們合作的 供應商需保證所提交的一切技術及開 發成果,均不得侵犯任何第三方的合法 轉利權、商標權、著作權等一切合法權 利。若供應商被發現違規情況,本集團 將會考慮暫停與其合作。

#### 6.5 維護信息安全



The Group has formulated the "Information Exchange Management Procedures" (《信息交流管理程序》) to strictly regulate the management of various data usage processes so as to maintain information security and customer privacy. The procedures impose strict requirements on the collection of customer information, the purpose of using customer information, the disclosure restrictions of customer information and the storage method of customer information as well as the internal communication arrangements of all departments, with an aim to prevent information leakage and protect information and privacy of the customers. We have also formulated the "Confidentiality Management Regulations" (《保密管理規定》), which stipulates that the processing and maintenance of top secret, confidential and secret data must be reviewed and approved by the relevant division managers in charge, and the top secret data must be reviewed and approved by the reviewed and approved by the customer data must be reviewed ficer.

The information management department of the Group is responsible for providing information security operation and maintenance support services. Maintenance and management are carried out by levels, categories and ranks in various aspects from construction of information technology projects, system service support, data center operation and maintenance management, and the installation and setup of employees' desktop systems, so as to implement information security precautionary measures effectively.

#### **6.6 QUALITY CUSTOMER SERVICE**

The Group highly values customer opinions and customer satisfaction, and is committed to providing quality services to its customers. We have formulated various management documents and procedures that regulate customer service and reception of the marketing department, including the "Customer Service Management Implementation Rules" (《客戶服務管理實施細則》), "Customer Reception Management Implementation Rules" (《客戶接待管理實施細則》), "Customer Complaint Handling Implementation Rules" (《客戶投訴處理實施細則》), "Customer Information Management Implementation Rules" (《客戶信息管理實施細則》) and "Customer Satisfaction Investigation Procedures" (《顧客滿意調 查程序》), so as to enhance customer satisfaction and trust in the Group and achieve a win-win cooperation relationship with its customers.

本集團訂立《信息交流管理程序》,嚴格 規範管理各類資料使用流程,維護信息 安全及客戶私隱,對於各部門關於客戶 資料的收集、使用客戶資料的目的、披 露客戶資料的限制,及保存客戶資料的 方法,預防信息泄露,保存客戶資料的 規定,預防信息泄露,保護客戶資料及 私隱。我們並制定《保密管理規定》,對 於絕密、機密、略相關分管領導審核批 准,絕密數據需經由總裁審批。

本集團的信息管理部門負責提供信息安 全運維保障服務,在信息化項目建設、 系統服務支持、數據中心運維管理,以 及員工桌面系統的安裝和設置等各方面 進行分層、分類、分級的維護和管理, 實施有效的信息安全預防措施。

#### 6.6 優質客戶服務

本集團非常重視客戶的意見和客戶的滿 意度,致力為客戶提供優質服務,我們 已制定各項規範市場部客戶服務和接待 的管理文件和程序,包括《客戶服務管理 實施細則》、《客戶接待管理實施細則》、 《客戶投訴處理實施細則》、《客戶信息管 理實施細則》及《顧客滿意調查程序》,以 提升客戶對本集團的滿意度和信任度, 達致與客戶雙贏的合作關係。

In order to improve service quality and provide comprehensive and professional services to the customers, the Group has standardized the reception procedures and reception etiquettes for customer visits. We designate different reception staff for different types of customers to meet the requirements of different customers. We have also formulated an operational process for handling customer complaints. When receiving a customer complaint, the customer service center will investigate and analyse the case to verify the validity of the complaint. If the case is justified, it will supervise the department in question to respond promptly and solutions must be provided within 24 hours. The customer service center will make a return visit to the customer within 24 hours to understand the handling progress of the complaint to enhance customer satisfaction.



Highly competent employees are important foundation for the steady development of Dongjiang Environmental. As such, the Group has always attached importance to human resources management and formulated an integrated human resources management system, striving to provide employees with competitive compensation and benefits, a healthy and safe working environment as well as a comprehensive talent cultivation system, so as to enhance the sense of belonging and happiness of employees and build a high-quality professional talent team. We regard "Sincerity" as the core corporate culture and adhere to the concept of "Be a Sincere Person, Do Things with Integrity, Communicate Honestly" for interpersonal communication, so that we can grow together with our employees to achieve a win-win situation.

#### 7.1 PRACTICES FOR EMPLOYMENT

The Group endeavors to provide a fair, harmonious, respectful and non-discriminatory working environment for our employees. We strictly abide by the relevant laws and regulations, such as the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Minors and the Provisions on the Prohibition of Using Child Labor. We have formulated the "Employee Handbook" (《員工手冊》), which specifically sets out such employment regulations as recruitment rules, attendance system, staff benefits, employee development, performance assessment and working regulations to ensure that employees can bring their strengths into full play for the Group under a fair and equitable system, at the same time enjoying attractive benefits and opportunities for professional development. As at 31 December 2019, the Group has 4,807 full-time employees. The detailed information of the Group's employees is set out in Appendix I: Sustainability Data Statements.

優秀的員工是東江環保穩健發展的重要 根基,因此,本集團一向重視人力資源 管理,制定整全的人力資源管理制度, 致力為員工提供具競爭力的薪酬福利, 一個健康安全的工作環境,全面的人才 培養體系,提升員工的歸屬感和幸 感,以打造高質量的專業人才隊伍。我 們以「誠」為企業核心文化,堅守「誠懇做 人、誠信做事、坦誠溝通」的待人理念, 與員工一同發展和成長,達致雙贏的局 面。

#### 7.1 員工僱傭常規

本集團竭力為我們的員工營造一個公 平、和諧、互相尊重、非歧視的工作環 境。我們嚴格遵循《中華人民共和國勞動 法》、《中華人民共和國勞動合同法》、 《中華人民共和國未成年人保護法》和《禁 止使用童工規定》等相關法律法規。我 制定《員工手冊》,明確列明聘用規定、 考核、工作規範等僱傭規範,以確立 書所長,並享有具吸引力的福利待遇和 專業發展的機會。截至二零職僱員人數為 4,807名僱員。本集團的詳細僱員情況載 列於附錄一:可持續發展數據摘要。

#### **RECRUITMENT MANAGEMENT SYSTEM**

To ensure the fairness and equity of the recruitment process, we formulated the "Recruitment Management System" (《招聘管理制度》) which regulates the recruitment procedures, principles, conditions and approval procedures. We have improved the talent screening mechanism to meet the requirements of the Group's business development. Recruitments are conducted through various channels, such as internal recruitment, recruitment websites, recruitment agencies and recruitment from universities. The human resources department conducts a uniform screening process and adheres to the principle of "Fairness, Justice, and Openness" during the assessment process. Factors such as the educational background, work experience, professional knowledge and ability of the candidates will be considered and all candidates will be provided with equal opportunities regardless of gender, age, nationality and ethnicity, so as to ensure that there is no discrimination. The human resources department will strictly review the identity, gualifications and actual age of the candidates during the recruitment screening process to prevent child labor. If any employee's identity and age are found to be untrue, we have the right to immediately terminate the labor contract with that employee. During the Year, the Group did not employ any child labor.

#### PERFORMANCE ASSESSMENT SYSTEM

The Group advocates the pursuit of excellence. In order to motivate employees to fully demonstrate their talents and abilities, and maximize the value of their works, we established the "Performance Assessment System" (《績效考核制度》). With the annual, semi-annual, monthly or quarterly periodic assessments, the employees are comprehensively evaluated in three aspects, namely work performance, learning and development and work attitude, thereby fairly and objectively reflecting the performance of the examinees and fairness of the assessment. The results of performance assessment shall be used as the basis for the employees' salary adjustment, year-end performance bonus, job deployment and promotion. To further stimulate the employees as a reward for their excellent work performance.

#### 7.2 HEALTH AND SAFETY OF EMPLOYEES

The Group pays high regarding the health and safety of employees. Accordingly, we actively promote the Sustainable Development Goals 3 of the UN, "Ensure Healthy Lives and Promote Well-being for All at All Ages", striving to create a healthy and safe working environment without accidents and injuries with all employees.



#### 招聘管理制度

為確保招聘流程公平公正,我們制定《招 聘管理制度》,規範了招聘程序、原則、 條件、審批程序,健全人才甄選機制, 以滿足本集團業務發展需要。本集團 通過招聘的各種渠道,如內部招聘、招 聘網站、招聘中介機構、院校招聘等, 在考核流程中,人力資源部進行統一的 甄選程序,秉持「公平、公正、公開」的 原則,以應聘者的學歷、工作經驗、專 業知識及能力等為考慮因素,不論其性 別、年齡、國籍和種族等狀況都可享有 平等的獲聘機會,確保不存在歧視的情 況。在招聘篩選過程中,人力資源部會 對應聘者的身份、資格及實際年齡進行 嚴格審查,以杜絕聘請童工。如發現員 工身份、年齡不符實,我們有權立即與 員工解除勞動合同。本年度,本集團沒 有聘用童工的個案發生。

#### 績效考核制度

本集團倡導追求卓越,為激勵員工充分發揮才幹和能力,體現自己工作的最大價值,我們建立《績效考核制度》,以年、月度或季度為考核周期,從 之下業績、學習與發展和工作態度周期,從 之下業績、學習與發展和工作態度現行。 之下客觀地反映出被考核者的工作表現 效考核結果作為員工的工作表明調整、 約 就考核之、崗位調配、升職和晉級 就 。為進一步激發員工的工作績效 的卓越工作表現。

#### 7.2 員工健康安全

本集團高度重視員工的健 康和安全,因此,我們致 力推動聯合國可持續發展 目標3一「確保健康的生 活方式,促進各年齡段人



群的福祉」,與所有員工一起致力營造無 事故和無受傷的健康和安全工作環境。



#### OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

Health and safety of employees are given high priority by the Group in its business management. We strictly abide by the occupational health and safety-related laws and regulations, including the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases, Administrative Measures for Occupational Health Inspection and Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used. We have also formulated the "Occupational Health Management Regulations" (《職業健康管理規定》) to specifically regulate the responsibilities and job duties of occupational health and safety management of various departments within the Group. The safety and environmental protection department at our headquarters, as the general management department, is responsible for formulating and improving our occupational health management system, carrying out various occupational health management work, and overseeing, inspecting and evaluating the related work of the subordinate units. The human resources department at our headquarters is responsible for improving the management regulations related to occupational health training, occupational hazard notification and occupational body check in the human resources management system.

According to the Production Safety Law of the People's Republic of China and Environmental Protection Law of the People's Republic of China, we have formulated the "Workplace and Behavior Safety Management Regulations" (《工作場所和行為安全管理規定》) to regulate the safety requirements and management of production areas, workplaces, facilities and equipment, and operating behaviors, strengthen occupational health and safety and environmental protection management, prevent and reduce production safety and environmental protection incidents, so as to protect the personal safety and health of our employees at workplace. For more details on the management system of occupational health and safety and environmental protection, please refer to section 6.1 Safety, Environment and Quality Management in the Report.

Every new employee shall receive occupational health training before taking up the post, and existing employees shall also receive occupational health training on a regular basis. The training content and specific training work are coordinated and arranged by the safety and environmental protection department of the unit with other departments, such as regular self-rescue and mutual-rescue skills training, education and training on professional knowledge and laws and regulations in relation to occupational health.

#### 職業健康安全管理

我們按照《中華人民共和國安全生產法》 和《中華人民共和國環境保護法》,制定 《工作場所和行為安全管理規定》,規範 對於生產區、工作場所、設施設備、作 業行為的安全要求及管理,加強職業健 康與安全環保管理,防止和減少生產 全環保事件,以保障我們的員工在工作 場所的人身安全眾保的管理體系詳情, 請參閱本報告章節6.1安全環境質量管 理。

每位新員工於上崗前均需要接受職業衛 生培訓,在職員工亦要定期接受職業衛 生培訓,培訓內容和具體培訓工作由單 位安全環保部門和各部門配合負責,如 定期舉辦自救互救技能培訓、職業健康 專業知識與法律法規的教育培訓工作等。

#### Occupational Health and Safety Training Content 職業健康安全培訓內容



#### **Emergency rescue drills**

In order to strengthen the emergency rescue capability and further improve the safety production emergency rescue system, all units of the Group continued to improve their emergency rescue plans and strengthened the emergency drills according to the actual situation, so as to continuously enhance their security risk prevention and emergency treatment capabilities as well as their emergency rescue capability for serious accidents. During the Year, emergency drills on fire, chemical leakage and poisoning in limited space have been conducted by various units.

A total of 253 emergency drills were organized by the Group, and a total of 3,795 employees participated in the drills.

#### 應急救援演習

為加強應急救援能力建設,進一步健全 安全生產應急救援體系,本集團各單位 在不斷完善應急救援預案的同時,結合 實際加強應急演練,不斷提高安全風險 防範和應急處置能力,提高特大事故應 急救援能力,本年度各單位分別進行針 對火災、化學品泄漏、有限空間中毒等 應急演練。

本集團共組織應急演習253次,參與演 練活動人數共有3,795人。

## Special Training on Safety and Environmental Protection of Dongjiang Environmental in 2019

In order to further strengthen the Group's standardized management of safety and environmental protection, and enhance the business knowledge and management level of our safety and environmental protection management personnel, the safety and environmental protection department at our headquarters organized a special training on safety and environmental protection of Dongjiang Environmental on 22 and 23 August 2019. Senior management of the Company including Yao Shu (chief executive officer), Wang Shi (vice chief executive officer), Wang Jianying (vice chief executive officer) and Wang Tian (vice chief executive officer) participated in the training. About 150 employees including department heads of the Group's headquarters, principal person in charge of each subsidiary, division managers, and the manager and management personnel of safety and environmental protection department attended the training on-site or via video conference.

During the training, we invited experienced safety and environmental protection experts in the industry to explain the expertise of safety standardized management, soil and groundwater pollution prevention and control, emergency management, safety-related legal risks and construction of safety and environmental protection information technology, and case study, standards, regulations and rules in a way that is easier to understand. The personnel participating in the training actively interacted with the experts who answered questions relating to the training content.



#### 東江環保2019年安全環保專題培 訓

為進一步加強本集團的安全環保規範 化管理,提升我們安環管理人員的業務 知識和管理水平,總部安全環保部於 2019年8月22至23日組織召開了東江環 保2019年安全環保專題培訓,姚曙總 裁、王石副總裁、王健英副總裁和王恬 副總裁等公司高層管理人員參加了培 訓。本集團總部各部門負責人以及各下 屬企業主要負責人、分管領導、安環經 理及安環管理人員等約150人參加了現 場或視頻會議。

本次培訓邀請了行業經驗豐富的安全環 保專家分別對安全標準化管理、土壤和 地下水污染防治、應急管理、安全法律 風險和安環信息化建設等專業知識進行 了講解,透過案例分析、標準規範、法 規條例等深入淺出的分享,參與培訓的 人員與老師積極互動,老師為培訓內容 的疑難進行解答。



#### FREE BODY CHECK

We value the physical and mental health of employees and organize body check activity for employees every year. We provide free body check for employees, and both male and female employees can undergo suitable body check to help employees discover latent diseases in a timely manner, focus on management of health risks and maintain good health.

The statistics on occupational health and safety of the Group during the Year is set out in Appendix I: Sustainability Data Statements. During the Reporting Period, we did not have any serious accidents involving workrelated injuries and fatalities of employees. All cases of work-related injuries have been properly handled in accordance with relevant national and local laws and regulations, and all employees involved have received appropriate treatment.

#### 7.3 REMUNERATION AND BENEFITS OF EMPLOYEES

In order to attract and retain outstanding talent, we are committed to providing competitive remuneration and benefits to our employees.

#### LABOR CONTRACTS

The Group implements strict labor contract management. All employees sign the labor contract on a voluntary and equal basis, which sets out matters such as salaries, working hours, holidays and termination basis to ensure that they clearly understand their job duties, remuneration and benefits, and no forced labor has occurred. The headquarters of the Group adopts a five-day work system with 40 hours a week. Due to the differences in the nature of production and operation as well as the work requirements of each business unit, each unit can adjust the working time according to the actual circumstances in compliance with laws and regulations. During the Year, the Group had no forced labor. If employees need to work overtime due to their duties, we will provide compensation leaves to them according to the overtime compensation regulations upon approval by the leaders.

#### BENEFITS

The Group established the "Remuneration and Benefits Management System" (《薪酬福利管理制度》) to provide attractive remuneration and benefits to employees. In addition to basic salary, the remuneration of our employees also includes annual bonus and business commission, which are subject to factors such as employee work performance, external market rate and economic benefits of the Group.

#### 免費健康體檢

我們重視員工的身心健康,每年為員工 開展健康體檢活動。我們為員工提供免 費健康體檢,男性和女性員工都可以分 別進行適合的體檢項目,讓員工可及時 發現潛伏的疾病,重點管理健康風險, 保持身體健康。

本年度本集團的職業健康和安全數據統 計已載列於附錄一:可持續發展數據摘 要。報告期內,我們並沒有發生員工因 工傷亡的嚴重事故,所有工傷個案已按 照國家及地方的相關法律法規獲得妥善 處理,所有相關員工已獲得適切治療。

#### 7.3 員工薪酬福利

為吸納及挽留優秀人才,我們致力為員 工提供優厚的薪酬福利待遇。

#### 勞工合同

#### 福利待遇

本集團設有《薪酬福利管理制度》,為員 工提供具吸引力的薪酬福利。我們員工 的薪酬除了基本工資外,還包括年度獎 金和業務提成,以員工工作績效、外部 薪酬市場水平、集團的經濟效益等因素 作決定。



According to the Labor Law of the People's Republic of China, employees of the Group enjoy statutory holidays as required by the national law and enjoy paid leaves such as annual leave, sick leave, marriage leave, bereavement leave, maternity leave, family planning leave and parental leave. We also provide five insurances and one fund to employees in accordance with the national statutory requirements, including basic endowment insurance, unemployment insurance, basic medical insurance, work-related injury insurance and maternity insurance. In addition, the Group also provides employee benefits that are more favorable than the statutory requirements, such as high-temperature operation subsidies and holiday benefits. We also provide accidental commercial insurance coverage for employees according to the levels and nature of position.

#### WELFARE FOR CULTURAL AND RECREATIONAL ACTIVITIES

The Group also organizes a wide range of cultural and recreational activities regularly for employees to participate, such as annual dinner party, large-scale cultural events and employees' birthday parties, so as to relieve employees' working pressure and strengthen the team spirit. We provide employees with spending or holiday gifts at the Spring Festival, Dragon Boat Festival and Mid-Autumn Festival every year to enhance their sense of belonging to the Group.

#### 7.4 VALUING TALENT CULTIVATION

Outstanding professional talents are our important valuable assets. Therefore, we are committed to providing employees with a better environment to cultivate talents and making good plans for their career development. We have established the Dongjiang Environmental Talents Training System to provide



employees with comprehensive training and development courses. We put in every effort to promote the Sustainable Development Goals 8 of the UN, "Promote Inclusive and Sustainable Economic Growth, Employment and Decent Work for All".

During the Year, we launched our efforts in training professional talents to solve the problem of talent supply based on the Group's strategic development direction, the actual needs of our business and vacancies for professional talents so that every employee has the opportunity to receive training and development in the Company. 本集團員工按照《中華人民共和國勞動 法》規定,可享有國家規定的法定節假 日,並享有年休假、病假、婚假、產假、計劃生育假、哺乳假等帶薪 假期。我們亦為員工繳納國家法定的 五險一金,包括基本養老保險、生育 險、基本醫療保險、工傷保險、生育保 險等。此外,本集團更提供優於法定要 求的員工福利保障,如高溫作業補貼、 節日福利等。我們亦按照崗位的級別及 工作性質,為員工購買意外商業保險作 保障。

#### 文娛活動福利

本集團亦定期舉辦多元化的文化娛樂活 動供員工參與,如年終晚會、大型文化 活動、員工生日晚會,為員工舒緩工作 壓力及加強團隊合作的精神。我們於每 年春節、端午節及中秋節向員工發放過 節費或過節禮品,加強他們對本集團的 歸屬感。

#### 7.4 重視人才培養

優 秀 專 業 的 人 才 是 我 們 重 要 的 寶 貴 資 產 , 因此,我們致力為員工 提供更好的成才培育環 境,為員工生涯發展作 良好規劃。我們設立東



江環保人才培養體系,向員工提供全面 的培訓發展課程,為推動聯合國可持續 發展目標8—「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」而努力。

本年度,我們按照集團戰略發展方向, 根據業務的現實需求和專業人才的缺 口,落實了專業人才的培養工作,解決 人才供應問題,讓每位員工都有機會在 公司中獲得培養與發展。





To maintain and continuously enhance the quality, professional knowledge and skills of the Group's employees, we provide regular training to our employees, including new staff training, various professional technical training and management talent training programs.

為保持及不斷提升本集團的員工質素、 專業知識及技能水平,我們為員工提供 定期培訓,包括新員工入職培訓、各項 專業技術培訓、管理人才培訓等。

Type of training 培訓類型	Purpose of training 培訓目的	No. of participants 參與人數
New Staff Training 新員工入職培訓	The online training involves the Company's history, rules and regulations, basic knowledge of safety and environmental protection, etc. which lays the foundation for new employees to start working at their positions. 線上培訓涉及了公司發展史、規章制度、安全環保基礎知 識等,為新員工進入崗位、開始新歷程奠定了基礎。	A total of hundreds of employees completed online learning and assessment. 共有數百名員工完成線上 學習與考核。
Landfill Specialization Training Class 填埋專題培訓班	With problem solving as the goal of learning and discussion, the class focuses on strengthening the environmental management of hazardous waste landfill and domestic waste landfill, preventing environmental risks during the landfill process and enhancing the operational disposal capabilities, aiming to solve the problems in production and operation and consolidate the Company's technology and management standards through learning modes such as class discussion and case analysis so as to promote the operation management of the Company. 以解決問題為學習研討目標,以加強危廢填埋、生活垃圾 填埋的環境管理、防範填埋過程中的環境風險,提升運營 處置能力為重點學習內容,通過課堂研討、案例分析等學 習方式推動解決生產經營中的難題、沉澱公司技術和管理 標準,促進提升公司運營管理水平。	A total of more than 60 students participated with a total of 16 training hours. 共有60餘名學員參與,總 培訓課時16小時。

Type of training 培訓類型	Purpose of training 培訓目的	No. of participants 參與人數
Dongjiang Star Fresh Graduates Training Camp 東江之星應屆生訓練營	The training continues to build a management talent reserve, which is the cradle for the Company to cultivate key personnel in the primary and secondary levels in the future. It focuses on training for production and operation talents, process technology talents, marketing talents, EHS talents and functional talents. 培訓持續打造管理人才後備梯隊,是公司培養未來中基層 關鍵崗位人才的搖籃,重點培養為生產運營型人才、工藝 技術型人才、市場型人才、EHS型人才、職能型人才。	A total of 34 students participated with a total of 144 training hours. 共有34名學員參與,總培 訓課時144小時。
Former Engineering Technology Business Department Luban Training Camp — Engineering Construction Practical Class 原工程技術事業部魯班 訓練營 — 工程建設實戰 班	The project is implemented in four phases, including "case group training", "practical application training", "summary" and "work application review". Through multi-phase learning and practical training, the "project management professional engineers" will be developed into a "craftsmen" team of Dongjiang with high resilience and technical skills. 該項目共分為四個階段實施,包括「案例集訓」、「實戰應 用訓練」、「總結提煉」、「工作應用檢視」。通過階段性的 學習與實戰訓練,將「項目管理專業工程師」打造成一支有 戰鬥力、有技術水平的東江「匠人」隊伍。	A total of 61 students participated with a total of 88.5 training hours. 共有61名學員參與,總培 訓課時88.5小時。
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# Plant Cultivation and Development

# 7. Talent Cultivation and Development 人才培育發展

Type of training 培訓類型	Purpose of training 培訓目的	No. of participants 參與人數
Guangdong Business Department Bee Soldiers Class 廣東事業部蜂兵班	The training combines practical exercises and classroom learning. By integrating practical courses of various professional sectors of safety and environmental protection, production, technology, equipment and material control with the general management courses to comprehensively enhance the professional and technical capabilities and management capabilities of the talents. 以實戰練習和課堂學習相融合,精選安環、生產、技術、 設備、物控各個專業模塊的實用課程與通用管理課程相結 合,全面提升梯隊人才的專業技術能力和管理能力。	A total of 35 students participated with a total of 72 training hours. 共有35名學員參與,總培 訓課時72小時。

## 8. Community Development and Care 社區建設與關懷

As a state-owned environmental protection enterprise that cares about the well-being of the people, the Group is committed to creating a better life and building a better society for the people. During the Year, we continued to carry out environmental emergency rescue operation and actively participated in various poverty alleviation efforts to make contribution towards assisting the country in building a moderately prosperous society free from pollution and poverty.

#### **8.1 EMERGENCY RESCUE OPERATION**

Being an environmental emergency rescue expert trusted by the government and enterprises, the Group has established a number of environmental rescue teams throughout the country. The Group participated in various rescue cases and handled major environmental incidents in the local provinces and municipalities, including cases of pollution and spill incidents.

In 2019, the emergency teams of the Group participated in 125 environmental emergency rescue tasks assigned by the local governments and disposed of hazardous waste of approximately 18,500 tons, which were well recognized by the local government authorities. In addition, we also participated in environmental emergency drills organized by the government from time to time in order to get ready for the efficient and rapid completion of the emergency rescue operations and effectively assist the community in eliminating the risk of environmental pollution. 作為心繫人民幸福的國有環保企業,本 集團致力為人民創造更美好的生活,建 立更美好的社會。本年度,我們繼續實 施環境應急救援行動,並積極投入各項 扶貧公益工作,為協助國家建設一個無 污染、無貧窮的小康社會作出貢獻。

#### 8.1 應急救援行動

本集團作為政府和企業一直信賴的環境 應急救援專家,在全國各地都建立了多 支環保救援隊,多次參與所在省、市重 大突發環境事故的救援和處理工作,包 括多項污染泄漏事故。

2019年,本集團各應急隊伍接收當地政府部門委派的應急任務125次,清理處置 危險廢物約1.85萬噸,受到了當地政府 部門的好評。此外,我們亦不定期參加 政府組織的環境應急演練,為高效迅速 地完成應急救援行動做好準備,協助社 區有效消除環境污染風險。 8. Community Development and Care 社區建設與關懷

#### Emergency Rescue Case 應急救援案例

On 11 November 2019, Bao'an Dongjiang Safety and Environmental Protection Department (寶安東江安環部) received a notice from Bao'an Administration Bureau of Shenzhen Municipal Ecology and Environment Bureau (深圳市生態環境局寶安管理局) that a transport vehicle was found illegally transferring hazardous waste in Songgang Sub-District and the hazardous waste in the vehicle showed signs of leakage, which might lead to an environmental pollution accident. We were requested to dispatch an environmental emergency team to carry out emergency rescue. Upon receiving the emergency task, our emergency response team arrived swiftly at the emergency site with emergency response team formulated a proper emergency response plan to launch our environmental emergency efforts on site. Finally, the task was completed successfully by controlling the spread of the source of pollution effectively and eliminating the risk of environmental pollution.

2019年11月11日,寶安東江安環部接 到深圳市生態環境局寶安管理局通知, 在松崗街道發現一輛非法轉移危險廢物 的運輸車輛,該車輛內的危險廢物已出 現泄漏的情況,可能會導致環境污染 故,請求我們出動環境應急隊伍開應急 太,請求我們出動環境應急隊伍開應急處 置隊伍攜帶應急物資趕赴應急現場, 經過風險分析和識別,制定了妥善的應 急處置方案後,對現場開展環境應急工 作,最終有效控制了污染源擴散,並消 除了環境污染風險,順利完成應急處置 任務。



## 8. Community Development and Care 社區建設與關懷

#### 8.2 GENEROUS SUPPORT FOR PUBLIC WELFARE AND CHARITY

The Group has always been pleased to promote public welfare and poverty alleviation. It is committed to achieving the Goal 1: NO POVERTY — "End poverty in all its forms everywhere" of the UN Sustainable Development Goals, as well as working hard towards the country's goal of building a moderately prosperous

society in all respects. During the Year, Dongjiang Environmental launched different types of poverty alleviation efforts and invested more than RMB0.91 million totally therein.

#### 8.2 熱心公益慈善

本集團一直樂於推動 公益扶貧工作,致力邁 進聯合國可持續發展 目標1:無貧窮一「在 全世界消除一切形式 的貧困」,也為國家將

1 NO POVERTY



全面建成小康社會的奮鬥目標努力。本 年度,東江環保開展不同類型的扶貧工 作,於扶貧範疇共投入超過91萬元人民 幣。

# Community Development and Care

# 8. Community Development and Care 社區建設與關懷

#### Social poverty alleviation 社會扶貧

- Mianyang Dongjiang donated RMB200,000 to Yuhuang Town, Peicheng District for the maintenance of the villagers' dilapidated houses, digging wells for water and the purchase of staple foodstuffs such as cereals and oil 綿陽東江向培城區玉皇鎮捐贈人民幣20萬元用於村民危房維護、打井取水及購買糧油食品
- Mianyang Dongjiang donated RMB200,000 to Shaojue County, Liangshan Prefecture, Sichuan Province for the construction of pig barns
  - 綿陽東江向四川涼山州邵覺縣捐贈人民幣20萬元用於建設養豬場
- Zhuhai Yongxingsheng purchased staple foodstuffs such as cereals and oil of more than RMB15,000 for the poverty-stricken families in Lishan Village
- 珠海永興盛購買糧油食品超過人民幣1.5萬元,用於慰問荔山村特困戶
- Donating RMB280,000 to Beishan Village, Mangdang Town, Yanping District for the construction of the elderly activity center

向延平區茫蕩鎮北山村捐贈人民幣28萬元,用於建設老人活動中心項目

- Donating 5 air-conditioners to Litong Primary School, Xialan Village, Luxia Town, Nanping City 向南平市爐下鎮下嵐村李銅小學捐贈5台空調
- Visiting impoverished villagers in Ronghua Village, Mianyang Town, Wuhua County, Meizhou City, Guangdong Province and conveying greetings to members in difficulty of the branch party committee of Lishan Village, Qianwu Town, Doumen District, Zhuhai City, Guangdong Province, and donating RMB5,000 in cash as well as daily-use items of RMB2,000

探望廣東省梅州市五華縣綿洋鎮榮華村貧困村民和慰問廣東省珠海市斗門區乾務鎮荔山村支部委員會困難 黨員,共捐贈人民幣5千元現金和人民幣2千元生活用品

#### Poverty alleviation charity fund 扶貧公益基金

• In December 2019, Jiangmen Dongjiang proactively responded to the call of the municipal Party Committee and the municipal governmen to participate in a charity fund-raising activity and donated an aggregrate amount of RMB100,000

2019年12月,江門東江積極響應市委及市政府號召,參與慈善公益募捐活動,共捐贈人民幣10萬元

#### Poverty alleviation for education 教育扶貧

• Jiangxi Dongjiang donated RMB50,000 to Dingqiao Primary School, Qiaodong Town, Fengcheng City for school contruction

江西東江資助豐城市橋東鎮丁橋小學建設,共人民幣5萬元

#### Poverty alleviation for environment construction 環境建設扶貧

Hubei Tianyin formulated a 3-Year Assistance Plan for Xingxing Village, Jiangling County, and donated 620 garbage bins and 8 garbage sorting trays of RMB49,000 in total 湖北天銀向江陵縣星星村制訂了3年幫扶計劃,捐贈垃圾桶620個,垃圾分類箱8個,共人民幣4.9萬元
Environmental <sup>1</sup> 理培筮疇1	Unit 單位	2019 2019年度
環境範疇 <sup>1</sup> Greenhouse Gas Emissions <sup>2</sup> 溫室氣體排放量 <sup>2</sup>		2019年度
Direct GHG emissions (Scope 1) 直接溫室氣體排放(範圍1)	Tonnes of CO <sub>2</sub> e 公噸二氧化碳當量	7,531.49
Direct GHG removals (Scope 1) (tree planting) 直接溫室氣體減除(範圍1)(樹木種植)	Tonnes of CO <sub>2</sub> e 公噸二氧化碳當量	7.25
Indirect GHG emissions (Scope 2) 間接溫室氣體排放(範圍2)	Tonnes of CO <sub>2</sub> e 公噸二氧化碳當量	37,594.24
Total GHG emissions (Scope 1 & 2) 溫室氣體排放總量(範圍1及2)	Tonnes of CO <sub>2</sub> e 公噸二氧化碳當量	45,118.48
Total GHG emissions intensity (per square meter) 溫室氣體排放強度(每平方米)	Tonnes of CO₂e/m² 公噸二氧化碳當量/平方米	0.24
Total GHG emissions intensity (per employee) 溫室氣體排放強度(每名員工)	Tonnes of CO₂e/employee 公噸二氧化碳當量/員工	35.22
Energy Consumption 能源消耗		
Total electricity consumption 總耗電量	MWh 兆 <i>瓦</i> 時	44,931.56
Total electricity intensity (per square meter) 總耗電強度(每平方米)	MWh/m² 兆瓦時/平方米	0.24
Natural gas consumption 天然氣消耗量	Ten thousand m <sup>3</sup> 萬立方米	213.83
Refinery dry gas consumption 煉廠乾氣消耗量	Tonne 公噸	0.05
Amount of diesel consumed by fixed equipment 固定設備耗用的柴油量	Liters 公升	761,162.38
Amount of diesel consumed by motorcade 車隊耗用的柴油量	Liters 公升	203,723.64
Amount of gasoline consumed of motorcade 車隊耗用的汽油量	Liters 公升	92,445.61

The environmental KPIs of 2019 cover the Group's headquarters' office building in Shenzhen and the offices and plants of the five principal subsidiaries of the Group, including Zhuhai Yongxingsheng, Jiangmen Dongjiang, Humen Green, Renewable Energy, and Qianhai Dongjiang. In the future, we will gradually expand the data collection scope and the disclosure coverage.

- <sup>2</sup> According to ISO 14064 of Greenhouse Gas Emissions Standard, direct GHG emissions (Scope 1) is the emissions directly owned and controlled by the Group, such as emissions from fixed equipment (including offices and plants), motorcade and refrigerant; indirect GHG emissions (Scope 2) is the energy indirect emissions, such as the electricity purchased from power companies (including offices and plants).
- 2019年度環境範疇數據涵蓋本集團深圳總部辦 公大樓及本集團旗下五家主要子公司的辦公室及 車間,包括珠海永興盛、江門東江、虎門綠源、 再生能源公司及前海東江。未來,我們將逐步擴 大數據收集範圍及加大披露覆蓋程度。

1

根據ISO 14064溫室氣體盤查標準,直接溫室氣 體排放(範疇一)針對直接來自於組織所擁有及控 制的排放源,如自身所擁有的固定設備(包括辦 公室和車間)、交通工具及製冷劑的排放;間接 溫室氣體排放(範疇二)針對能源間接排放源,如 購入電力而造成間接之溫室氣體排放(包括辦公 室和車間)。

Environmental <sup>1</sup> 環境範疇 <sup>1</sup>	Unit 單位	2019 2019年度
Water Consumption 水源消耗		
Total water consumption 總耗水量	m³ 立方米	286,345.00
Total water consumption intensity (per square meter) 總耗水強度(每平方米)	m³/m² 立方米/平方米	1.50
Hazardous Waste 有害廢棄物		
Hazardous waste <sup>3</sup> production 有害廢棄物 <sup>3</sup> 產量	Tonnes 公 噸	5,033.31
Hazardous waste <sup>3</sup> recycling 有害廢棄物 <sup>3</sup> 回收量	Tonnes 公噸	4,477.04
Hazardous waste production intensity (per square meter) 有害廢棄物產量強度(每平方米)	Tonne/m² 公噸/平方米	0.026
Other Hazardous Waste 其他有害廢棄物		
Waste computer production 廢電腦產量	Sets 台	7
Waste toner cartridge/ink cartridge production 廢硒鼓/墨盒產量	Kg 千克	12.72
Waste batteries production 廢電池產量	Kg 千克	15.04
Waste toner cartridge/ink cartridge recycling 廢硒鼓/墨盒回收量	Kg 千克	8
Waste batteries recycling 廢電池回收量	Kg 千克	9.04
Non-hazardous Waste 無害廢棄物		,
Non-hazardous waste <sup>4</sup> production 無害廢棄物4產量	Tonnes 公噸	14,183.75
Non-hazardous waste⁴ recycling 無害廢棄物⁴回收量	Tonnes 公噸	13,855.17
Non-hazardous waste intensity (per square meter) 無害廢棄物強度(每平方米)	Tonne/m² 公噸/平方米	0.074

<sup>3</sup> The hazardous waste includes ash, slag from incineration, waste liquid from laboratory, waste oil, waste oil barrel and waste catalyst.

有害廢棄物包括焚燒飛灰、焚燒爐渣、化驗室廢 液、廢機油、廢機油空桶及廢催化劑。

<sup>4</sup> Non-hazardous waste includes smelting waste, sludge, waste paper, waste plastic, waste iron, waste wood, domestic garbage, food waste and garden waste.

無害廢棄物包括冶煉廢渣、污泥、廢紙、廢塑 料、廢鐵、廢木材、生活垃圾、廚餘及園林垃 圾。

4

Environmental <sup>1</sup> 環境範疇 <sup>1</sup>	Unit 單位	2019 2019年度
Paper consumption 紙張消耗		
Paper consumption 紙張消耗	Tonnes 公噸	4.22
Paper consumption intensity (per employee) 紙張消耗強度(每名員工)	Tonne/employee 公噸/員工	0.003
Social⁵ 社會範疇⁵	Unit 單位	2019 2019年度
Total employees 僱員總數	No. of people 人數	4,807
Employees by Gender 按性別劃分的僱員		
Female employees 女性僱員	No. of people 人數	1,014
Male employees 男性僱員	No. of people 人數	3,793
Employees by Employment Category 按職位類型劃分的僱員		
Junior employees 初級員工	No. of people 人數	4,402
Intermediate management 中級管理層	No. of people 人數	335
Senior management 高級管理層	No. of people 人數	70
Employees by Age Group 按年齡組別劃分的僱員		
Below 30 30歲以下	No. of people 人數	1,209
30–50 30–50歲	No. of people 人數	3,033
Over 50 50歲以上	No. of people 人數	565

2019年度全年社會範疇數據涵蓋全集團範圍。

5



Social⁵ 社會範疇⁵	Unit 單位	2019 2019年度
Employees by Geographical Region 按地區劃分的僱員		
North China 華北區域	No. of people 人數	291
East China 華東區域	No. of people 人數	1,234
Central China 華中區域	No. of people 人數	602
Northwest China 西北區域	No. of people 人數	92
Southern China 南方區域	No. of people 人數	2,565
Other locations (including Hong Kong, Macau, Taiwan) 其他區域(包括港澳台)	No. of people 人數	23
Employee Turnover Rate 僱員流失率		
Total employee turnover rate 僱員總流失率	%	22.8%
Employee Turnover Rate by Gender 按性別劃分的僱員流失率		
Female employee 女性僱員	%	19.3%
Male employee 男性僱員	%	23.7%
Employee Turnover Rate by Age Group 按年齡組別劃分的僱員流失率		
Below 30 30歲以下	%	30.7%
30–50 30–50歲	%	20.2%
Over 50 50歲以上	%	17.0%

Social⁵ 社會範疇⁵	Unit 單位	2019 2019年度
Employee Turnover Rate by Geographical Region 按地區劃分的僱員流失率		
North China 華北區域	%	24.0%
East China 華東區域	%	22.7%
Central China 華中區域	%	26.0%
Northwest China 西北區域	%	19.3%
Southern China 南方區域	%	22.1%
Other locations (including Hong Kong, Macau, Taiwan) 其他區域(包括港澳台)	%	0.0%
Percentage of Employees Trained by Gender 按性別劃分的受訓僱員百分比		
Female employees 女性僱員	%	71.8%
Male employees 男性僱員	%	35.1%
Percentage of Employees Trained by Employee Category 按職位類型劃分的受訓僱員百分比		
Junior employees 初級員工	%	37.6%
Intermediate management 中級管理層	%	99.4%
Senior management 高級管理層	%	100.0%

Social⁵ 社會範疇⁵	Unit 單位	2019 2019年度
Average Training Hours Completed per Employee by Gender 按性別劃分的每名僱員完成培訓的平均時數		
Female employees 女性僱員	Hours 小時	12.2
Male employees 男性僱員	Hours 小時	55.3
Average Training Hours Completed per Employee by Employee C 按職位類型劃分的每名僱員完成培訓的平均時數	ategory	
Junior 初級員工	Hours 小時	86.0
Intermediate management 中級管理層	Hours 小時	11.2
Senior management 高級管理層	Hours 小時	3.5
Occupational Health and Safety 職業健康和安全		
Work-related fatalities 因工死亡人數	No. of people 人數	0
Anticorruption 反貪污		
Concluded legal cases regarding corrupt practices brought against the Group or its employees 對本集團或僱員提出並已審結的貪污訴訟案件數目	Case 宗	0

<b>Description of t</b> 指標內容	he Indicator		Related Section(s) 相關章節
A. Environmental 環境範疇			
A1: Emissions 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 greenhouse gas emissions, 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。	-
	A1.1	The types of emissions and respective emissions data. 排放物種類及相關排放數據。	5.1 Environmental Protection Business 5.1 環保業務
	A1.2	Greenhouse gas emissions in total and, where appropriate, intensity. 溫室氣體總排放量及密度。	Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要
	A1.3	Total hazardous waste produced and, where appropriate, intensity. 所產生有害廢棄物總量及密度。	Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要
	A1.4	Total non-hazardous waste produced and, where appropriate, intensity. 所產生無害廢棄物總量及密度。	Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要
	A1.5	Description of measures to mitigate emissions and results achieved. 描述減低排放量的措施及所得成果。	5.3 Green Operation 5.3 綠色運營
	A1.6	Description of how hazardous and non- hazardous wastes are handled, reduction initiatives and results achieved. 描述處理有害及無害廢棄物的方法、減低產 生量的措施及所得成果。	I



	c <mark>ription of th</mark> e 內容	e Indicator		Related Section(s) 相關章節
A2:	Use of Resources 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。	5. Building a Green Environment Together 5. 共建綠色環境
		A2.1	Direct and/or indirect energy consumption by type in total and intensity. 按類型劃分的直接及/或間接能源(如電、 氣或油)總耗量及密度。	Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要
		A2.2	Water consumption in total and intensity. 總耗水量及密度。	Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要
		A2.3	Description of energy use efficiency initiatives and results achieved. 描述能源使用效益計劃及所得成果。	5.3 Green Operation 5.3 綠色運營
		A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved. 描述求取適用水源可有任何問題,以及提升 用水效益計劃及所得成果。	5.3 Green Operation 5.3 綠色運營
		A2.5	Total packaging material used for finished products and, if applicable, with reference to per unit produced. 製成品所用包裝材料的總量及每生產單位佔 量。	Not applicable. The Group's business does not involve packaging materials 不適用,本集團業務不 涉及包裝材料
A3:	The Environment and Natural Resources 環境及 天然資源	General Disclosure 一般披露	Policies on minimising the issuer's significant impact 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。	5. Building a Green Environment Together 5. 共建綠色環境
		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。	-

	Description of the Indicator 指標內容			Related Section(s) 相關章節
B. S	ocial 上會範疇			
B1:	Employment 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。	Employment 7.1 員工僱傭常規 7.3 Remuneration and Benefits of Employees
		B1.1	Total workforce by gender, employment type, age group and geographical region. 按性別、僱傭類型、年齡組別及地區劃分的 僱員總數。	Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要
		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。	Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要



	cription of the 震內容	e Indicator		Related Section(s) 相關章節
B2:	Health and Safety 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。	-
		B2.1	Number and rate of work-related fatalities. 因工作關係而死亡的人數及比率。	7.2 Health and Safety of Employees 7.2 員工健康安全 Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要
		B2.2	Lost days due to work injury. 因工傷損失工作日數。	The Group will consider to disclose the relevant data in the future 本集團將考慮於日後披 露有關數據
		B2.3	Description of occupational health and safety measures adopted, 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。	7.2 Health and Safety of Employees 7.2 員工健康安全
B3:	Development and Training 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。	
		B3.1	The percentage of employees trained by gender and employee category (such as senior management, intermediate management, etc.). 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。	Data Statements
		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。	Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要

	cription of the 票內容	e Indicator		Related Section(s) 相關章節
B4:	Labor Standards 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 labor. 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。	7.1 Practices for Employment 7.1 員工僱傭常規 7.3 Remuneration and Benefits of Employees 7.3 員工薪酬福利
		B4.1	Description of measures to review employment practices to avoid child and forced labor. 描述檢討招聘慣例的措施以避免童工及強制 勞工。	7.1 Practices for Employment 7.1 員工僱傭常規 7.3 Remuneration and Benefits of Employees 7.3 員工薪酬福利
		В4.2	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。	7.1 Practices for Employment 7.1 員工僱傭常規 7.3 Remuneration and Benefits of Employees 7.3 員工薪酬福利
B5:	Supply Chain Management 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。	6.2 Responsible Supplier Management 6.2 負責任供應商管理
		B5.1	Number of suppliers by geographical region. 按地區劃分的供應商數目。	6.2 Responsible Supplier Management 6.2 負責任供應商管理
		В5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, 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、以及有關慣例的執行及 監察方法。	6.2 Responsible Supplier Management 6.2 負責任供應商管理



Description of the 指標內容	e Indicator		Related Section(s) 相關章節
B6: Product Responsibility 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、標簽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。	Environmental and Quality Management 6.1 安全環境質量管理 6.5 Maintaining the
	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 而須回收的百分比。	
	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。	
	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。	6.4 Respecting the Intellectual Property Rights 6.4 尊重知識產權
	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。	6.1 Safety, Environmental and Quality Management 6.1 安全環境質量管理
	B6.5	Description of consumer data protection and privacy policies, 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。	6.5 Maintaining the Information Security 6.5 維護信息安全

Description of the Indicator 指標內容				Related Section(s) 相關章節
Β7:	Anticorruption 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。	6.3 Anti-corruption 6.3 反腐倡廉建設
		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. 於匯報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。	6.3 Anti-corruption 6.3 反腐倡廉建設 Appendix I: Sustainability Data Statements 附錄一:可持續發展數 據摘要
		B7.2	Description of preventive measures and whistle-blowing procedures, 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。	
B8:	Community Investment 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營運所在社區需要和 確保其業務活動會考慮社區利益的政策。	8. Community Development and Care 8. 社區建設與關懷
		B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor 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)。	8. Community Development and Care 8. 社區建設與關懷
		B8.2	Resources contributed. 在專注範疇所動用資源。	8. Community Development and Care 8. 社區建設與關懷



# DONGJIANG ENVIRONMENTAL COMPANY LIMITED\* 東江環保股份有限公司

