Luye Pharma Group Ltd.
绿叶制药集团有限公司
(incorporated in Bermuda with limited liability)
Stock Code: 2186

Environmental, Social and Governance Report 2018

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Environmental, Social and Governance Report

About this Report

Basis for Preparation

This Environmental, Social and Governance Report (the "ESG Report" or the "Report") aims to present the environmental, social and governance performance of Luye Pharma Group Ltd. (hereinafter the "Company") and its subsidiaries (collectively "Luye Pharma" or "we" or "us") during the year of 2018. The Report has been prepared by the Company in accordance with the Environmental, Social and Governance Reporting Guide (hereinafter the "ESG Guide") as contained in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited issued by The Stock Exchange of Hong Kong Limited, and with reference to the GRI Standards issued by the Global Reporting Initiative. The Report is our third ESG Report addressed to the public. Luye Pharma's approaches and strategies on environment and social management will be disclosed in the respective sections of the Report.

Scope of Report

The content of the Report mainly focuses on Luye Pharma's core business conducted in Mainland China, with an aim to report Luye Pharma's environmental and social policies and performance. Unless otherwise stated, the Report covers the period from 1 January 2018 to 31 December 2018 (hereinafter the "Year").

Endorsement and Approval

The board of directors of the Company is responsible for the assessment and identification of related ESG risks, and to ensure that appropriate and effective risk management and internal control systems are in place. At the same time, the board of directors accepts full responsibility for Luye Pharma's strategies and report on environmental, social and governance. The Report is prepared in accordance with the four reporting principles of the ESG Guide — materiality, quantitative, balance and consistency. Luye Pharma has determined the key disclosures contents of this Report through materiality assessment, disclosed the quantifiable environmental and social performance, and applied the disclosure and statistical methodologies which are consistent to those of the ESG Report for the last year to collect the information in the preparation of the Report. Moreover, the Report has complied with all "comply or explain" provisions under the ESG Guide.

Reader's Feedback

You are welcome to express your valuable opinions on our ESG report by contacting Luye Pharma through:

Investors Relation Department
+852-3523 0423.

About Luye Pharma

Luye Pharma is an international pharmaceutical company under Luye Life Sciences Group Ltd, dedicated to the R&D, manufacturing and sales of innovative medications. With three primary strategic focuses, which are global R&D, global manufacturing, and global market, the Company focuses on four major therapeutic areas, namely central nervous system, oncology, cardiovasology, and alimentary tract and metabolism, with central nervous system and oncology treatments being our two main core strategic areas.

Corporate Culture

Management Principles of the Group

Customer First
Always put customer interests first.
Avoid narrow professional outlook and detachment from customer needs.

Results Oriented
Always strive for results, work with a "can-do" attitude and commit fully.
Avoid bureaucracy, excuses or procrastination.

Rational Decision-making
Always make decisions based on a structured and inclusive process.
Avoid subjectivity and isolation.

Team Player Mentality
Always prioritize the organization and keep a cross-boundary collaborative mindset.
Avoid siloed and domain-centric thinking.

Develop and Mentor Talents
Always prepare and encourage critical talent to be in place to meet business needs.
Avoid withholding opportunities and credit for only yourself,
and neglecting subordinates' needs, feelings and expectations.

Be Truthful and Fair
Always demonstrate fairness, equality, openness and transparency.
Avoid close-mindedness, subjectivity or biased judgements.

Self Reflection
Always strive for continuous improvement through inner reflection.
Avoid conceit and reluctance to learn.

Awards of the Year

In November 2018, Luye Pharma was awarded the 2018 China Annual "The Most Socially Responsible Employer (最具社會責任僱主)" in the "Future Career with Intelligence (智場未來)" 2018 China Best Employer Award Ceremony, and China Human Capital and International Management Forum (2018中國年度最佳僱主頒獎盛典暨中國人力資本國際管理論壇) organized by Zhaopin.com (智聯招聘).

In October 2018, for the results announcement of the 2018 "Golden Wing Awards (金翼獎)" of the most valuable Hong Kong listed companies contests (最具價值港股通公司評選活動), hosted by the Securities Times (《證券時報》), Luye Pharma was honored on the list of Hong Kong Stock Connect Growth Company Rankings (最具價值港股通公司價值評選排行榜) in the 2018 "Golden Wing Awards".

In October 2018, Luye Pharma was awarded the ESG Social Contribution Award from SynTao (商道縱橫), to commend our long-term efforts and outstanding contributions in protecting the environment and promoting innovation and social development. Luye Pharma's ESG performance assessment ranked the first among the pharmaceutical listed companies in China.

On 6 August 2018, the Ministry of Industry and Information Technology announced the evaluation results of 2018 national innovation demonstration enterprises (2018年國家技術創新示範企業), with Luye Pharma and other 16 pharmaceutical enterprises on the list.

On 25 July 2018, E Medicine Manager (《E藥經理人》) announced Luye Pharma as one of the "Top 20 Most Competitive Listed Company in the PRC Pharmaceutical Industry of 2018 (2018中國最具競爭力醫藥上市公司20強)".

On 6 July 2018, the Seventh Zhongguancun Quality Awards (第七屆中關村質量獎) organized the Award Ceremony at the People's Government of Haidian District. After the selection at different levels, Luye Pharma (Beijing Base) was awarded the Seventh Zhongguancun Quality Awards.

In May 2018, "HRoot Awards 2018", which was organized by HRoot, a leading human resources media company in China, was held in Beijing. Luye Pharma was awarded the "2018 Best HR Teams in Greater China (2018大中華區最佳人力資源團隊)".

In March 2018, the Ministry of Education announced the results of the Higher Education Outstanding Scientific Research Output Awards (Science and Technology) (2017年度高等學校科學研究優秀成果獎 (科學技術)). The project of "evaluation, mechanical research and application of anti-inflammatory medication and inflammation (藥物抗炎與致炎作用評價、機制研究及其應用)" completed by Luye Pharma and YanTai University though in-depth integration of industry, academia and research was awarded the second-class award in Scientific and Technological Progress (科技進步二等獎). This is the first time Luye Pharma obtained the Higher Education Outstanding Scientific Research Output Awards from the Ministry of Education.

In February 2018, Luye Pharma (Nanjing Base) was awarded the "Golden Award of the Human Resources and Innovative Practices in China (中國人力資源實踐創新金獎)" in the 2017 Human Resources and Innovative Practices (Enterprises) in China Selection (2017中國人力資源實踐創新(企業)評選). The activity was launched and organized by GHR (環球人力資源智庫) with the aims to recognize innovation enterprises that can lead the HR sector.

Corporate Sustainability Management

As Luye Pharma continues to develop, the model of corporate sustainability management has become increasingly important. Under the general trend of sustainable development across the globe, Luye Pharma continuously improves its operation and management by initiating systematic management towards the responsibilities in terms of environment, labor and operation in the corporate's operation process, continuously promoting its related performance. Luye Pharma carefully listens to the voices of our stakeholders, hoping to join hands with different parties to achieve economic growth, environmental protection and social harmonious development.

Material topics included in this section

- Operational compliance

Determination and Management of Environmental, Social and Governance Risks

The followings are the major environmental, social, and governance risks and uncertainties identified by Luye Pharma. Save as stated below, there may be other risks and uncertainties which are not known to Luye Pharma or which may not be material at present but could turn out to be material in the future.

Operational Risks

Operational risks refer to the risk of loss resulting from the inadequacy or lack of personnel and system, or from external events. The responsibility of managing operational risks basically rests with every function at divisional and departmental levels. Key functions in Luye Pharma are guided by their standard operating procedures, authority and reporting framework. The management will identify and assess the key operational exposures regularly, so that appropriate risk management measures can be taken.

Risks of Supply and Retention of Personnel

Luye Pharma may be exposed to the risk of not being able to attract and retain key personnel and talents who have appropriate and required skills, experience and competence, and meet the business objectives of Luye Pharma. In light of such risk, Luye Pharma will offer attractive remuneration package to suitable personnel.

Environmental, Health and Safety Risks

Environmental, health and safety risks refer to the potential loss resulting from inadequacy in environmental management and occupational health and safety management, or from accidents. Luye Pharma has developed an environmental, health and safety management system in these aspects. The management will regularly identify and assess relevant risks, and implement appropriate risk response in the product life cycle.

Communication with Stakeholders

Luye Pharma treasures the opinions from our stakeholders. We gain understanding of their evaluations and expectations through diverse communication channels and platforms, which will help Luye Pharma objectively review and resolve the problems identified in our sustainability work. Currently, Luye Pharma's stakeholders mainly include government and regulators, investors, customers, employees, business partners/suppliers, peers, non-government organizations, media and the public.

Luye Pharma expects that the Report can serve a communication channel among different stakeholders through reporting the annual performance of Luye Pharma in fulfilling the environmental and social responsibilities in response to the matters concerned by different parties. This Year, Luye Pharma conducted a survey on the materiality of sustainability topics by way of questionnaire to incorporate the opinions from different stakeholders into our corporate sustainability management work as one of the considerations in our corporate sustainable development planning.

Materiality Assessment Procedures

1. *Identifying Stakeholders*

   Taking the business perspective into consideration, Luye Pharma has identified our major stakeholders, who/which are closely related with us, to participate in this year's materiality assessment.

   - Government and regulators
   - Investors
   - Customers
   - Employees
   - Business partners/suppliers
   - Peers
   - Non-government organizations
   - Media
   - The public

2. *Questionnaire*

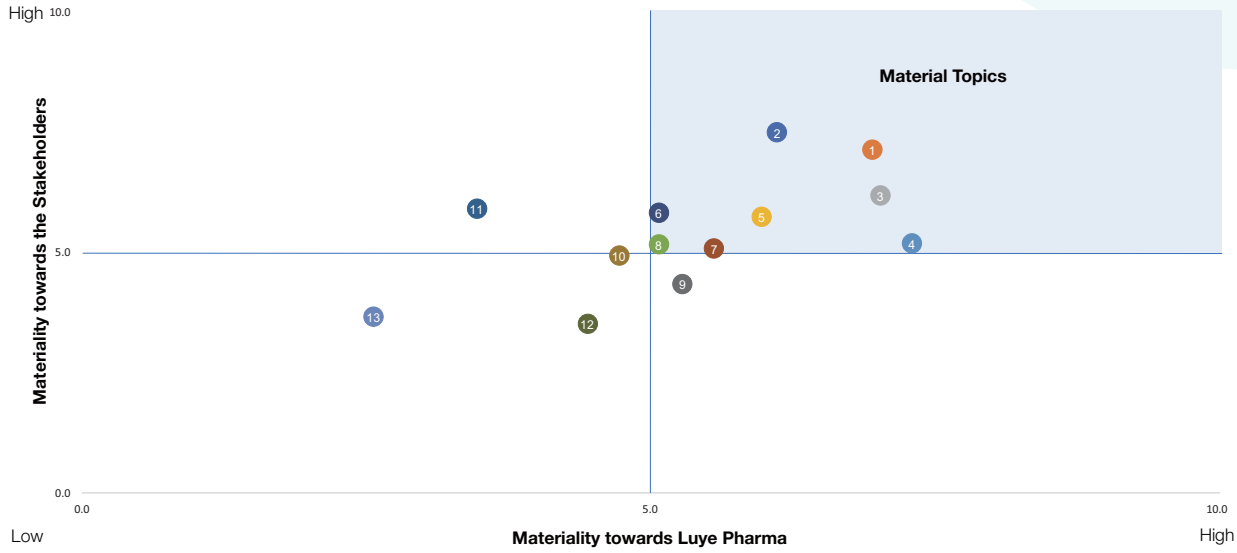
   Luye Pharma has identified 34 potential sustainability issues associated with Luye Pharma with reference to the ESG Guide and GRI Standards, and combining the development trend of pharmaceutical industry and the general concerned matters. We understand how our stakeholders value our sustainability issues and other valuable opinions in the form of questionnaire. We have collected a total of 2,962 valid samples under this questionnaire.

3. *Results Analysis and Verification*

   According to the results of the questionnaire, Luye Pharma conducted a matrix analysis from two dimensions, which are the materiality towards the stakeholders and the materiality towards Luye Pharma, in order to prioritize the importance of those topics. The management of Luye Pharma verified the priority results to ensure that the result is in line with the Company's actual situation.

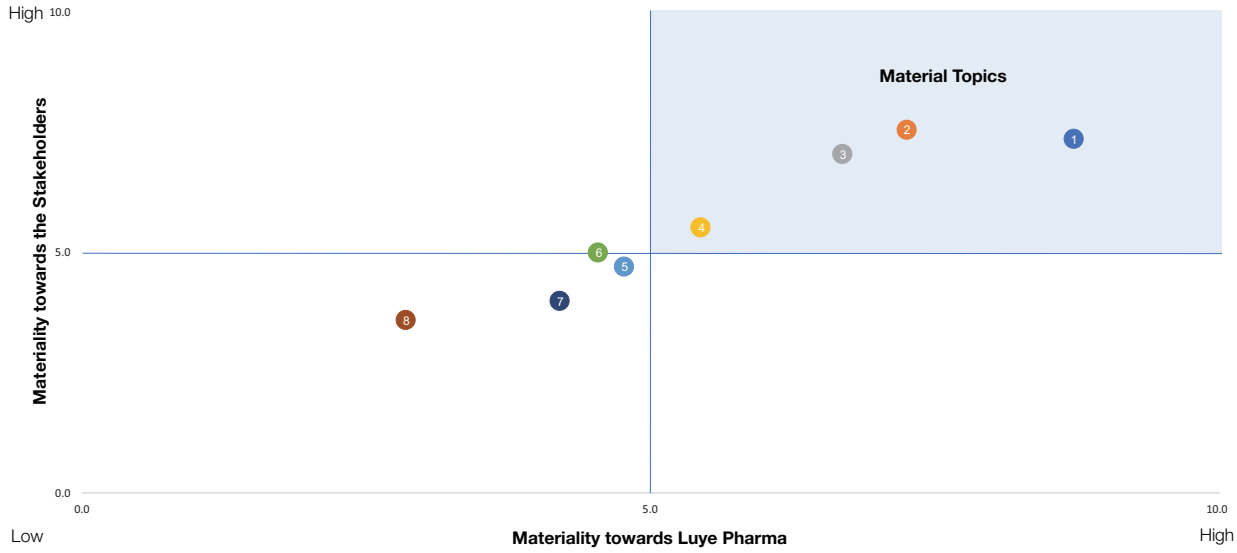
Luye Pharma believes that environmental responsibility, labor responsibility and operational responsibility are part of the Company's sustainable development process that should not be overlooked. Therefore, we classified the identified sustainability issues into three aspects of responsibility for survey. The results of the survey showed the issues we need to focus on and respond to under each responsibility. The following shows the matrices of analyses of the importance of sustainability issues under the aspects of environmental responsibility, labor responsibility, and operational responsibility.

Materiality Assessment of Luye Pharma's Environmental Responsibility Topics



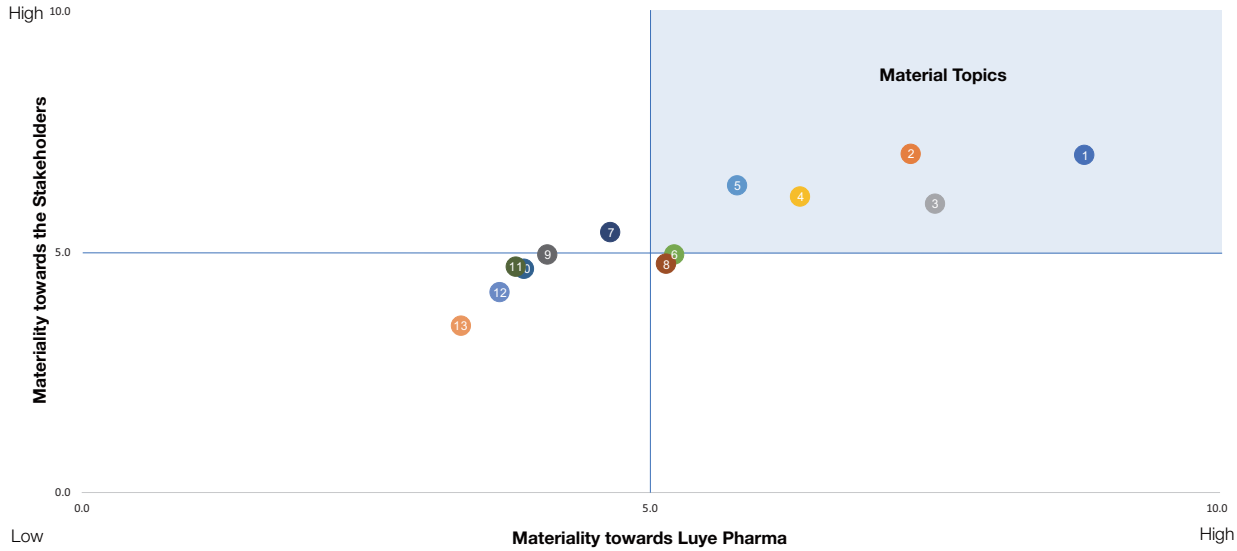
1. Pollutant (including wastewater and exhaust gases) discharge and management
2. Hazardous waste discharge and management (including medical waste and organic liquid waste)
3. Non-hazardous waste discharge management (including dregs of decoctions and domestic waste)
4. Green manufacturing system governing product life circle
5. Use of water resources
6. Chemicals management
7. Use of energy
8. Greenhouse gas emission and management
9. Use and management of packaging materials
10. Results of environmental monitoring
11. Measures for protection of natural ecological environmental
12. Green office plan and measures
13. Environmental activities for public event

Materiality Assessment of Luye Pharma's Labor Responsibility Topics



1. Occupational health and safety system
2. Employee salary and benefits
3. Employee training and occupational development
4. Employee Recruitment policy
5. Policy for prohibiting child labor and forced labor
6. Disclosure of employees' work-related injuries and fatalities
7. Percentage of female management staff
8. Number of employees

Materiality Assessment of Luye Pharma's Operational Responsibility Topics



1. Drugs manufacturing and quality management system
2. Product R&D and innovation
3. Operational compliance
4. Safety production and emergency handling procedure
5. Protection of intellectual property rights
6. Selection and management of suppliers
7. Management of key laboratories
8. Customer complaints handling mechanism
9. Management of projects as supported and encouraged by the state
10. Anti-corruption policies and measures
11. Protection of customer privacy
12. Anti-monopoly policy (fair market competition)
13. Community engagement and contribution (including the time, money, manpower and resources contributed to poverty alleviation)

According to the score of respective topics, the top topics of concern of Luye Pharma, in order, are as follows:

List of Material Topics (from the most material to the least material)		
Environmental Responsibility	**Labor Responsibility**	**Operational Responsibility**
1. Pollutant discharge and management	1. Occupational health and safety system	1. Drugs manufacturing and quality management system
2. Hazardous waste discharge and management	2. Employee salary and benefits	2. Product R&D and innovation
3. Non-hazardous waste discharge management	3. Employee training and occupational development	3. Operational compliance
4. Green manufacturing system governing product life circle	4. Employee recruitment policy	4. Safety production and emergency handling procedure
5. Use of water resources		5. Protection of intellectual property rights
6. Chemicals management		6. Selection and management of suppliers
7. Use of energy		
8. Greenhouse gas emission and management		

Regular Communication with Stakeholders

Apart from inviting stakeholders to participate in an annual materiality assessment of sustainability issues, we also maintain communication with them through diverse channels during the Year, to understand their expectations from various-perspectives. Integrating the result of the materiality assessment and our regular communication with the stakeholders, we have included the relevant sustainability issues into the section of the Report, and made a key points presentation in response towards their expectations.

Major stakeholders	Major expectations on us	Our response channels	Page numbers of respective sections
Government and regulators	• Compliance with the laws and regulations • Enhancement of technical research and development of pharmaceuticals	• Improving legal risk prevention and control system • Increased investments in drugs research and development	• Scientific Research and Innovation (p.15) • Each section in the Report
Investors	• Sound corporate operation management to minimize operational risks • Good investment returns • Transparent information disclosure	• Holding regular results announcement presentations and general meetings • Improving legal risk prevention and control system • Updating the Company's website on a regular basis • to ensure investors have access to latest information on the Company	• Each section in the Report
Customers	• Provision of safe and quality drugs • Continuous research and development on new drugs • Protection of consumer interests	• Increased investments in drugs research and development • Improving drugs manufacturing management system • Conducting customer satisfaction survey	• Product and Service Quality (p.11) • Scientific Research and Innovation (p.15)
Staff	• A good workplace • Bright development prospects	• Providing good packages • Holding a variety of training programs • Organizing various employee activities • Providing a safe workplace	• Caring our Talents (p.35) • Environment, Health and Safety (p.19)
Business partners/ Suppliers	• Mutual benefits and reciprocity	• Actively in seeking quality suppliers	• Social Responsibility (p.43)
Peers	• Advancement of industry development	• Actively holding and participating in industry forums and exchange activities	• Communication with Stakeholders (p.6)
Non-government organization	• Continuous research and development on new drugs	• Increased investments in drugs research and development	• Scientific Research and Innovation (p.15)
Media	• Transparent information disclosure	• Organizing press conference	• Each section in the Report
Public	• Serving the community • Public welfare and charity	• Taking an active part in community activities • Taking an active part in charitable activities	• Social Responsibility (p.43)

Presentation of Communication Activities with Stakeholders

Case: Regenerative Medicine and Precision Medicine Forum (再生醫學精準醫學專題會)

In September 2018, Luye Pharma participated in the "Regenerative Medicine and Precision Medicine Forum under 2018 Yantai Pharmaceutical Innovation and Development International Conference (2018煙台醫藥創新與發展國際會議再生醫學精準醫學專題會)" organized by Luye Life Sciences Group Ltd. Authoritative experts in regenerative medicine and precision medicine disciplines from all over the world gathered for a discussion on how to facilitate the industrial development in the areas of regenerative medicine and precision medicine by connecting R&D, investment and industrial resources.

Photo: Participating in the Regenerative Medicine and Precision Medicine Forum

Case: Participating in the Construction of National Standard System for Intelligent Manufacturing Conference (國家智能製造標準體系建設宣導會)

In November 2018, Luye Pharma participated in the conference for the central region on the Guidelines for the Construction of National Standard System for Intelligent Manufacturing in Jinan, to enhance the awareness and understanding of the national standard system for intelligent manufacturing, and to effectively facilitate the national intelligent manufacturing projects in which Luye Pharma has participated.

Photo: Construction of National Standard System for Intelligent Manufacturing Conference

Product and Service Quality

Product quality is the spine of a pharmaceutical enterprise. We insist on improving our quality management system on the basis of observing the international and national regulations and standards relating to the quality of pharmaceuticals to ensure the safe use of pharmaceuticals. We also insist on using responsible marketing means on the products by upholding the professional ethics in promoting the sales of pharmaceuticals, and adhering to a customer-oriented operating philosophy by committing to serving our customers with heart.

Material Topics included in this section

- Drugs manufacturing and quality management system

Drugs Manufacturing Management

In strict compliance with the laws and regulations including Law of the PRC on the Administration of Pharmaceuticals (《中華人民共和國藥品管理法》), Implementation Regulations on the Law of the PRC on the Administration of Pharmaceuticals (《中華人民共和國藥品管理法實施條例》), the Measures for Supervision and Administration of Pharmaceuticals Manufacturing (《藥品生產監督管理辦法》), the Good Manufacturing Practices for Pharmaceutical Products (《藥品生產質量管理規範》) (GMP), Luye Pharma has developed GMP quality management system applicable to its drugs manufacturing base. Such GMP system ensures our compliance with hygienic quality requirements under the national rules and regulations relating to raw materials, personnel, facilities and equipment, manufacturing process, packaging and transportation, and quality control, and regulates the overall operations process of Luye Pharma's manufacturing base, and assists us to identify and improve any problems existing in our production in a timely manner. A number of products of Luye Pharma and its production line have passed the GMP inspections. For example, the workshop for topical use pharmaceuticals and oral pharmaceuticals has passed the TGA GMP inspections from Australia, the workshop for solid pharmaceuticals has passed the GMP inspections from the European Union and the workshop for injected microsphere has passed the GMP site inspections from the European Union. We have also passed ISO 9001 quality system certification in respect of the research and development and production of drugs, to provide better product quality assurance.

During the Year, Luye Pharma has 32 products with which the local GMP certification have been recorded.

Luye Pharma (Beijing Base)
ISO 9001:2015 certificate

Luye Pharma continues to improve GMP and ISO 9001:2015 quality system certification to continuously upgrade the quality management level.

Production lines based in China have passed:

- China GMP (2010 version) inspection
- EU GMP inspection
- Australia TGA GMP inspection
- ISO 9001:2015 quality management system certification

Production lines based in Europe have passed:

- EU GMP inspection
- America FDA GMP inspection
- Japan GMP inspection

GMP System

Management aspect

- Quality management
- Plant and facility management
- Equipment management
- Materials and product management
- File management
- Manufacturing management
- Quality control (QC) and quality assurance (QA)
- Product shipping and recall management
- Self-inspection management

Management system

- Management standards
- Operation standards
- Process documentation
- Risk assessment report
- Receipts documentation
- Accounts record
- Warehouse cleaning
- Processing specifications
- Batch production, and batch packaging recording
- Technical standards

During the production of the pharmaceuticals, Luye Pharma's quality control (QC) and quality assurance (QA) staff is responsible for the duties of quality assurance and quality control. They are involved in all activities related to quality and being responsible for all the documents related to this standard. Among which, the QC personnel is mainly responsible for all incoming materials, intermediary products, inspection and approval of products pending for packaging and finished products, water quality analysis and inspection of stability. The QA personnel is mainly responsible for the inspection of plant environment, supervision of water quality, sample observation and management, assessment and approval of suppliers, review and analysis of product quality, supervision of the Company's production activities based GMP and relevant rules and organization of self-inspection.

Luye Pharma will conduct a sample check on product quality after production. Luye Pharma has developed the "Rules for Acceptance, Inspection and Handling of Sample Products" (《樣品的接收、檢驗、處理規程》) to regulate the entire process including acceptance, inspection and handling of sample products by personnel in charge of sampling and quality control. Upon completion of sample check, the QC personnel will issue an inspection report enclosed with the "certificate of qualification" or "certificate of disqualification" of sample products. Raw materials, finished products, intermediate products, packaging materials to be disposed of and other remaining sample products will be handed over to personnel in charge of sample acceptance, who will fill in the "Sheet of Destruction of Remaining Sample Products after Inspection" (《檢驗剩餘樣品消毀單》) , and then they will be disposed of by a professional company engaged.

In addition, to further ensure the safety of patients who use our drugs, Luye Pharma adheres to the Chinese Pharmacopoeia (2015 version) (《中國藥典(2015年版)》) and has developed the "Management Regulations on Drug Recalls" (《藥品召回管理規程》) to regulate the procedure for drug recalls. This applies to the recall of drugs due to substandard quality or unsuitability for clinical use (suspension of clinical use caused by reported adverse drug reactions). Luye Pharma's quality management leaders are responsible for timely summarization of recalled products, and assessing whether the quality of recalled products is affected, and proposing detailed solutions and submitting the same to the group leaders for approval, and also reporting to the drugs supervision and administration department for filing or approval. During the Year, Luye Pharma had strictly complied with the relevant system in production and quality management, and no product of Luye Pharma had been recalled for safety and health reasons.

Product Sales and Customer Service Management

We focus on protecting customers' interests when we conduct product sales and providing customer services. Luye Pharma has strictly complied with the requirements under the regulations of Law of the PRC on the Administration of Pharmaceuticals (《中華人民共和國藥品管理法》), GMP, Good Supply Practices for Pharmaceutical Products (《藥品經營質量管理規範》) (GSP) for the production, sales and services, and has complied the quality approach of "pursuing higher quality and satisfying customers's needs (《追求更高品質，滿足顧客需求》)", to ensure that all of our products sold in the market are qualified, so as to provide safe and effective products and services for our customers. We have formulated the "Luye Pharma Group's Conduct Standard for Pharmaceuticals Promotion (《绿叶制药集團藥品推廣行為準則》)" to provide code of conduct and moral guidelines in respect of the promotion and sales of pharmaceuticals for each employee, and to further maintain and strengthen Luye Pharma's reputation with good standing in the market. All employees of Luye Pharma should understand and strictly follow all the requirements under this standard. They should sign and disclaim the standard, and implement it consistently in their daily promotion of pharmaceuticals. The content covered in the standard include the standard of the promoting information, basic principles of the application of promotional fee, promotional materials, academic exchange with the professionals in the medical hygiene sector, management of promotional fee and penalties to protect the Company's sales safety and customer's interests in various aspects.

Moreover, the labels of all Luye Pharma's products are designed according to the product manuals approved by the China Food and Drug Administration (《國家食品藥品監督管理總管》). The product advertisements are released in relevant media after obtaining the pharmaceuticals and advertisement approval circular as approved by the drugs supervision and administration department in accordance with the requirements of the Law of the PRC on the Administration of Pharmaceuticals (《中華人民共和國藥品管理法》) and the Administrative Regulations on Pharmaceutical Product Prescriptions and Labeling (《藥品廣告審查辦法》), to ensure the truthfulness and accuracy of the information with no misleading or deceptive statements. In addition, we strictly preserve customers' information to prevent it from leakage in any form.

During the Year, Luye Pharma has complied with the applicable laws and regulations that are significant to Luye Pharma in relation to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.

To provide better services to our customers, Luye Pharma conducts customers' satisfaction survey on a regular basis, with a view to understand the customers' opinions for us, and any issues for our enhancement or improvement. Luye Pharma has developed the "Monitoring Procedures for Customers' Satisfaction (《顧客滿意度監控程序》)", aiming at collecting their evaluations and opinions on our drug quality, work quality and service quality.

1. Procedure for customer satisfaction survey:
   Quality Assurance (QA) staff of our Quality Assurance department and sales staff of our sales department shall conduct customer satisfaction survey on an annual basis; and designate an annual plan for customer satisfaction survey, to finalize target customer groups, sample size, types of product involved, survey method and the term of collecting questionnaire distributed. Sales staff will distribute the customer satisfaction survey questionnaire to target customer groups and collect it based on the survey plan. QA staff will conduct statistical analysis on the questionnaire collected and issue an annual customer satisfaction survey report.

2. Coverage of customer satisfaction survey:
   The survey covers product quality, therapeutic effect of pharmaceuticals, accuracy of quantity delivered, rate of timely delivery, customer service, packaging method, transport service, other opinions and suggestions, and customer's feedback.

3. Method of customer satisfaction survey:
   The customers' satisfaction survey may be conducted in the form of written questionnaire, online questionnaire, users' interview on site, and facsimile/telephone calls.

   Moreover, to effectively manage customers' complaints, Luye Pharma has formulated the "Management Regulations on User's Complaints" (《用戶投訴管理規程》) based on GMP, which regulates the procedures, for admissibility, registration, assessment, investigation, handling and traceability of complaints to ensure product quality and safety of customers who use the drugs. According to the requirements, all complaints should be under documentation and review. Focusing on the complaints related to the product quality defects, Luye Pharma documents the complaints in details and undergoes investigation. If there are defects found or in doubt in any batch of drugs, Luye Pharma will inspect other batches of drugs to ascertain whether other batches are affected.

The following is the duties of various departments and personnel of Luye Pharma who/which are responsible for customer complaints:

Responsible department and personnel	Duties
All departments and personnel	• Required to receive user's complaint through telephone calls, facsimile, etc. and hand it over to director of QA department
Quality assurance (QA) department	• In charge of collection, forwarding and feedback information of all user's complaints either in written or oral form • In charge of classification of user's complaints • In charge of investigation, assessment and handling of quality-related complaints • Annual review and tendency analysis on product complaints
Person in charge of adverse drug reaction monitoring	• In charge of investigation and assessment of medical problem complaints
Production department	• Assisting in investigation into production-related complaints
Marketing system	• In charge of investigation, assessment and handling of "suspected fake medicines related complaints"
Quality manager	• In charge of implementation of handling user's complaints
Person in charge of quality management	• Approving opinions on handling of user's complaints

In 2018, we have received a total of 45 complaints. All complaints have been answered and replied in a timely manner according to the procedures of handling complaints. We respond to customers' requests actively.

Scientific Research and Innovation

Luye Pharma is committed to undertaking innovative pharmaceutic R&D, manufacturing and sales. We have over 30 key listed products covering the therapeutic areas including oncology, central nervous system (CNS), cardiovascular system, and alimentary tract and metabolism. We have businesses in major global pharmaceutical markets and emerging markets in the PRC, the U.S., Europe, Australia, Japan and South Korea. Luye Pharma has established a number of R&D bases around the world, investing considerate resources to promote the R&D of drugs, while systematically managing intellectual property to protect its scientific research achievements.

Material topics included in this section:

- Product R&D and innovation
- Protection of intellectual property

Innovative R&D

During the Year, Luye Pharma's expenses in R&D investment amounted to RMB491,160,000, with 550 R&D staff. We have set up R&D centers in the PRC, the U.S. and Europe, focusing on the areas of CNS, oncology, cardiovascular system, and alimentary tract and metabolism. We have also set up four platforms in respect of long-acting and extended release technology, liposome and targeted drug delivery technology, transdermal drug delivery technology and new compounds. We own a State Key Laboratory of Long-acting and Targeting Drug Delivery System (長效和靶向製劑國家重點實驗室). During the Year, Luye Pharma had a pipeline of 40 products under research in the PRC, which were under various stages of development. These products under research included 15 oncology products, 8 cardiovascular and metabolism products, as well as 15 CNS products. Furthermore, Luye Pharma had a pipeline of 10 products under research in the U.S., Europe and Japan, which were under various stages of development.

Chronicle of R&D Events

1. *Recognition as "Post-doctorate Scientific Research Workstation" (博士後科研工作站)*

   Luye Pharma's Post-doctorate Scientific Research Workstation was set up in December 1999 as approved by the national Ministry of Personnel with major joint recruitment institutions including Health Science Center, Peking University and Shandong University. We have successfully nurtured four postdoctoral students from the station and developed high-level scientific talents for the country.

2. *Established the School of Pharmacy in Yantai University*

   In August 2000, each of Luye Pharma and Yantai University contributed 50% to jointly establish the School of Pharmacy in Yantai University. Through the new school operation mode of integrating production, teaching and research, we fully leveraged the education resources, talents advantages, R&D conditions of both the university and Luye Pharma, to explore a way to talents development. In terms of school quality, efficiency, environment and research level, the School of Pharmacy in Yantai University has attained an advanced level of the institutions of similar nature in the PRC, which it is a base for nurturing high-quality pharmaceutical talent resource. Significant achievements have been reached as we have integrated cutting-edged scientific research environment and practical experience of Luye Pharma into teaching. The pharmaceutical major was approved by Ministry of Education as a national special major for construction in 2010.

3. *Recognition as "State Key Laboratory of Long-acting and Extended Release and Targeting Technology" (長效緩控釋和靶向技術國家重點實驗室) approved by Ministry of Science and Technology*

   In September 2010, the construction plan of PRC's first "State Key Laboratory of Long-acting and Targeting Drug Delivery System" was established by Luye Pharmaceutical Investment Co., Ltd. through demonstration of experts organized by the Ministry of Science and Technology. It was officially put into operation in 2014 after inspection and acceptance by the Ministry of Science and Technology. The main research directions of this laboratory are long-acting and targeting drug delivery system, including microspheres and liposome, as well as drug delivery technology, with targeting drug delivery system such as long-acting and extended release microspheres drug delivery system and liposome drug delivery system for injection, relevant key technology and relevant functional materials as its key research content. Biodegradable microspheres technology and liposome technology are the popular technologies for international R&D at present. Only a few enterprises in countries and regions in Europe, the U.S. and Japan have mastered the long-acting injection microspheres drug delivery system and targeting liposome drug preparation research core technology. Currently, the PRC mainly relies on importing this particular technology area. Luye Pharma is the first enterprise to establish a key laboratory related to this area in the PRC. It has important meaning in terms of leading and pioneering technology concerning strengthening R&D and production of that area.

4. *Cooperation with research partners*

   Luye Pharma has entered into cooperation arrangements with overseas pharmaceutical companies, research institutions and universities to jointly carry out R&D of new medical products in order to improve the R&D capability of Luye Pharma. Through this type of cooperation, Luye Pharma can further expand access to securing exclusive products. The help of the existing R&D platform of the R&D partners is expected to help us reduce the preliminary cost and risk related to products at preliminary development stage. The research partners of Luye Pharma include DONG-A Pharmaceutical in South Korea, Yale University, Academy of Military Medical Sciences, Peking University, Sichuan University, Jilin University, Shenyang Pharmaceutical University, Beijing University of Chinese Medicine, Yantai University, Zhejiang University, East China Normal University and the Medical School, University of South Carolina, the U.S..

R&D Center in PRC	Global R&D platform R&D Center in the U.S.	R&D Center in Europe

Main R&D approach:

- Long-acting and extended release technology
- Liposome and targeting drug delivery system technology
- Biological antibody technology
- The first State Key Laboratory of Long-acting and Targeting Drug Delivery System in the PRC

Main R&D approach:

- Technological exploration in advanced innovative pharmaceutical area
- International R&D coordination

Main R&D approach:

- Transdermal drug delivery technology

R&D expenditures during the Year:
RMB491,160,000

Total number of research staff of Luye Pharma as at the end of 2018:
550

Case: Drugs for Parkinson's disease research project

Rotigotine Extended Release Microspheres for injection LY03003 is the major type of new drugs relating to CNS area in Luye Pharma, and also the first global drug that could generates long-term Continuous Dopamine Stimulation (CDS). LY03003 has proceeded to Phase III clinical trials/key trial stage in the PRC and the U.S., respectively, and has achieved good progress.

According to the plan, LY03003 has been developed in the major strategic markets such as the U.S., the PRC, Japan and Europe at the same time, and will first be introduced to the markets in the U.S. and the PRC. Further promotion to more markets around the world will be pushed forward subsequently.

Case: Drugs for moderate to severe depressive disorder research project

LY03005 project (Ansofaxine hydrochloride extended release tablets) is a new drug in Class 1 developed within the Luye Pharma's new compounds platform for treatment of depressive disorder. The drug has entered into the pivotal study in the U.S. and entered phase III clinical trial in the PRC, and showed positive results for the treatment of depressive disorder.

Luye Pharma had obtained the patents of the compound, crystal form and formulation for such project. The patent of compound and crystal form has been granted in China, the United States, Europe, Japan and Korea, and is continuously supported by the special funds for major projects under the Eleventh, Twelfth and Thirteenth Five-Year Plans of the PRC.

Protection of Intellectual Property Rights

Luye Pharma attaches great importance to the combination of the innovation and R&D of drugs and intellectual property rights protection. Since the establishment of intellectual property department in 1998, the intellectual property rights of scientific research technology have been protected. As guided by "intellectual property rights-oriented strategies" and under the premise of "independent technology innovation", we insist on integrating intellectual property rights into the entire process of technical research and development, product manufacturing and marketing to effectively ensure that "we are advanced in technology, exclusive in the market with adequate legal safeguard", with an aim to develop into an international well-known branded enterprise with proprietary intellectual property rights and sustainable and stable development.

Luye Pharma highly values intellectual property rights, and strictly abides by the laws and regulations such as the Patent Law of the People's Republic of China (《中華人民共和國專利法》) and Trademark Law of the People's Republic of China (《中華人民共和國商標法》). In order to regulate the work of intellectual property rights, capitalizing on the opportunity of intellectual property rights management system certification, we have developed and improved a number of systems on the documentation regulations on intellectual property rights management, including the Control Procedures for Use of Intellectual Property Rights (《知識產權運用控制程序》), the Control Procedures for Risk Management of Intellectual Property Rights (《知識產權風險管理控制程序》), the Patent Management System of Luye Pharma Group Ltd. (《绿叶制药集团有限公司專利管理制度》), and the Inventor's Recognition System of Luye Pharma Group Ltd. (《绿叶制药集团有限公司發明人署名制度》), integrating intellectual property rights management into all parts along our business operations. Among which, the Patent Management System of Luye Pharma Group Ltd. regulates the requirements for the formation of an organization in charge of patent works, duties of the organization and staff, patents and property rights management system, use of patent information, implementation of patents, and reward for inventors.

The statistics on the patents and trademarks held and under application during the Year by Luye Pharma:

	Patent Registration	
	Valid Authorized Patent	Valid Patent under Application
National	254	56
Overseas	444	116

	Trademark Registration	
	Valid Authorized Trademark	Valid Trademark under Application
National	314	102
Overseas	149	131

Pic: United States Patent Registration Certification (Patent No.: US10098882)

Environment, Health and Safety

Luye Pharma strives to become "the world's most reputable leading pharmaceutical enterprise". In order to materialize this vision, Luye Pharma focuses on the environment and health safety, and maintain the normal operation and continuous improvement of comprehensive management system under environment and health safety ("EHS"). We are committed to taking effective measures towards EHS management system for improvement on an on-going basis, to prevent and rectify any deviation of EHS policy and objectives, and continuously enhance EHS awareness and behaviors of all staff of Luye Pharma.

Material topics included in this section:

- Pollutant discharge and management
- Hazardous waste discharge and management
- Non-hazardous waste discharge and management
- Green manufacturing system governing product life circle
- Use of water resources
- Chemicals management
- Use of energy
- Greenhouse gas emission management

Environmental Protection

As a responsible pharmaceutical company, Luye Pharma always adheres to environmental protection measures and is committed to minimizing the impacts on the environment caused by our daily operations. The main activity areas of Luye Pharma include production base, laboratories and offices. During our operation process, our major environmental impacts include use of energy, greenhouse gas emission, air pollutant discharge, hazardous and non-hazardous waste discharge and disposal of chemicals. For the detailed environment statistics, see the Environmental Performance Table set out in the Appendix.

Luye Pharma has established the environmental management system (EMS) on the basis of ISO 14001:2015 to systematically manage key environmental areas, so as to avoid, reduce or eliminate the impacts of operational activities to environment. We have thoroughly implemented environment management measures in our business operation, and evaluated the environmental factors of the life circle of each product, including design and R&D, production, use and disposal process for environmental assessment and taken measures. We conduct EMS internal and external audit each year to review and examine the operation of management system to ensure the completeness of EMS and its continuous improvement to continue to enhance Luye Pharma's environmental performance. During the Year, Luye Pharma's manufacturing bases in Shandong, Sichuan, Beijing and Nanjing have passed the ISO 14001 certification. During the course of operation of EMS, for the management of air and greenhouse gas emissions, the discharges into water and land, and the generation of hazardous and non-hazardous waste, Luye Pharma has complied with applicable laws and regulations that have a significant impact on us during the Year.

Environmental Laws and Regulations Complied with by Luye Pharma (including but not limited to)

- the Environmental Protection Law of the People's Republic of China (《中華人民共和國環境保護法》)
- the Environmental Protection Tax Law of the People's Republic of China (《中華人民共和國環境保護税法》)
- the Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Wastes (《中華人民共和國固體廢物污染環境防治法》)
- the Law of the People's Republic of China on Prevention and Control of Water Pollution (《中華人民共和國水污染防治法》)
- the Law of the People's Republic of China on Prevention and Control of Air Pollution (《中華人民共和國大氣污染防治法》)
- the Law of the People's Republic of China on Appraising of Environment Impacts (《中華人民共和國環境影響評價法》)
- the Law of the People's Republic of China on Energy Conservation (《中華人民共和國節約能源法》)
- the Law of the People's Republic of China on Prevention and Control of Pollution From Environmental Noise (《中華人民共和國環境噪聲污染防治法》)

For each environmental management step, we have formulated a number of environmental policies with reference to the applicable laws and regulations, part of which are set out below:

Management aspect	Internal policy of Luye Pharma (including but not limited to)
Use of energy Greenhouse gas emission	• Energy Resource Management Procedures (能源資源管理程序)
Air pollutant emission	• Management Procedures for Prevention and Control of Air Pollution and Hazards (《大氣污染及危害防治管理程序》)
Water resources	• Management Procedures for Prevention and Control of Water Pollution (《水體污染防治管理程序》)
Hazardous and non-hazardous waste	• Management Procedures for Prevention and Control of Pollution by Solid Waste (《固體廢物污染防治管理程序》) • Management Regulations on Waste (《廢棄物管理規程》)
Chemicals	• Management Procedures for Dangerous Goods (《危險品管理程序》)
Environmental accidents	• Environmental Accidents Emergency Plan (《突發環境事件應急預案》)
Other environmental impacts	• Procedures for Identification, Appraisal and Update of Environmental Factors (《環境因素識別、評價與更新程序》) • Management Procedures on Noise and Vibration (《噪聲與震動管理程序》)

ISO 14001 certificates:

Climate Changes

Climate change has struck an unprecedented impact globally, resulting in the rise of sea level and exacerbations of natural disasters that also pose actual and potential risks to the operation of enterprises. The deterioration of greenhouse effect is believed to be one of the reasons for climate change. Luye Pharma actively responds to the Paris Agreement, mainly starting from energy management in order to reduce the greenhouse gas emissions involved during operations. Luye Pharma's greenhouse gas emissions during operations are mainly from boilers, refrigeration equipment, production facilities, automobiles and office electricity consumption.

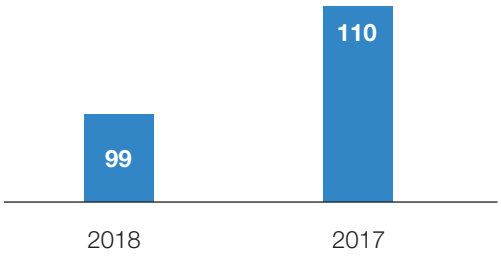
Total electricity consumption in 2018
51,031,051 kWh

Total greenhouse gas emission
51,262 tons

Total intensity of greenhouse gas emission
0.10 ton/income in RMB10,000

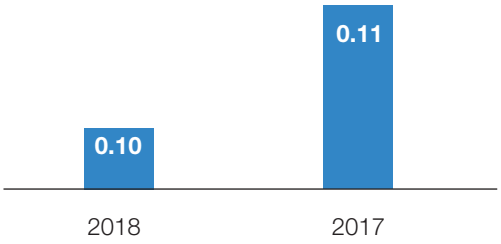
Benefiting from a series of energy saving measures implemented during the Year, the intensity of electricity consumption and the intensity of greenhouse gas emission in total both decreased in 2018 as compared to those in 2017.

Intensity of electricity consumption



(kWh/income in RMB10,000)

Intensity of greenhouse gas emission in total



(Tons/income in RMB10,000)

The following are Luye Pharma's management policies and measures for energy conservation and emission reduction.

Control of energy consumption

- Complete various energy statistical returns.
- Reasonably arrange energy usage according to the production volume, make scientific use of energy and water resources (electricity, water, gas, automobiles), implement load regulation and avoid usage during peak period, improve the equilibrium rate of energy use, enhance the management of rational energy use of major energy-consuming equipment and energy supply networks according to the relevant requirements.
- Post "save electricity" labels in office sites.

Management of energy indicators

- Formulate annual energy consumption budgets.
- Classify, implement and control over energy indicators.
- Investigate reasons for budget overrun of indicators and formulate improvement measures.

Progress in energy-saving technologies

- Actively promote the use of new technologies, new processes, new materials and new equipment that are energy-saving, and conduct research on energy-saving technologies with focus on major energy-consuming processes and equipment.

About the Company's use of electricity on lighting

- Electricity on lighting is used in office, warehouse and various production areas, where natural light should be fully utilized to avoid the use of excessive lights.
- Save electricity on lighting in production and warehouse areas by turning off lights when leaving.
- Each department shall put forward reasonable suggestions on the arrangement of lighting installations with reference to the lighting conditions of office and production areas by giving feedbacks to the engineering department to achieve power saving.

About the use of air conditioning

- Air conditioning shall be operated for the purposes of safety, energy-saving, efficiency, functionality and comfort while meeting production, experiment and office needs.
- Cooling and heating periods: based on climate change, it is generally stipulated that the cooling period is from 1 June to 30 September each year; while the heating period is from 15 November to 31 March each year.
- Set indoor temperature for the air conditioning: 24–26℃ for the air conditioning in summer and 18–20℃ in winter.
- Conduct regular maintenance of air conditioning system, and, if any problem occurs, report to the engineering department for repair so as to ensure the energy consumption rate remains normal.

About the use of office electric appliances

- Office electric appliances such as computers, photocopiers, drinking fountains and refrigerators shall only be turned on when used, so as to reduce standby power consumption.
- Designated personnel shall check whether the switches of all electric appliances are powered off after work.

About production electricity

- Production electricity refers to the electricity used in the operation of a variety of machinery equipment, which shall be handled and controlled by designated personnel in avoidance of idling operation and unnecessary waste of energy.
- The air conditioning in workshops could be reasonably switched on or off according to the production conditions and GMP requirements.

Case: Energy saving transformation of air conditioning water chiller units

During the Year, Luye Pharma (Yantai Base) installed a set of DCU SCADA800 Central Air Conditioning Energy Management Control System to replace the original air conditioning system in the industrial park complex, microsphere building and quality control building, so as to improve the overall system efficiency of water chiller for air conditioning and reduce expenses for energy consumption. By installing such system, the overall energy efficiency of air conditioning and refrigeration system was improved. The project could realize an overall energy saving rate of not less than 18.6%, and is expected to save electricity cost of approximately RMB1,670,000 per year, saving money and energy at the same time.

Case: Energy saving transformation of distributed air conditioning system

During the Year, Luye Pharma (Yantai Base) made improvement on the warehouse air conditioning system, replacing the centralized air conditioning system with distributed air conditioning system. The total power of the new system is 197.55 kW, representing a decrease of 376.85 kW as compared to that of the original system. The replaced distributed air conditioning system is estimated to saved 678,330 kWh of electricity and approximately RMB467,800.

Photo: Distributed air conditioning system

Air Emissions Management

Luye Pharma's air emissions are mainly from the exhaust gas emitted by combustion of boilers and workshops and laboratories. We have developed policies such as the "Management Regulations on Prevention and Control of Air Pollution and Hazards" (《大氣污染及危害防治管理規程》) to monitor the exhaust gas generated by Luye Pharma, and ensure its compliance with the existing requirements under environmental laws and regulations, so as to reduce environmental pollution. The safety and environmental department is the competent department in charge of exhaust gas emission control, responsible for exhaust gas emission control and daily monitoring. Luye Pharma has prescribed the exhaust gas emission standard limits set under the "Emission Standard of Air Pollutants for Boilers" (《鍋爐大氣污染物排放標準》) (GB13271-2014) and the "Integrated Emission Standard of Air Pollutants" (《大氣污染物排放標準《》) (GB16297-1996) as the emission standards, stipulating that the emission shall not exceed such limits. In addition, we have respective measures in place for the treatment of air pollutants from different sources.

Treatment of exhaust gas from combustion of boilers

- Exhaust gas from combustion of fuels of boilers shall be emitted after dust removal, desulfurization and other treatments. The actual exhaust gas emitted will be monitored by a professional environmental monitoring agency on an annual basis, the results of which shall meet the requirements under the "Emission Standard of Air Pollutants for Boilers" (《鍋爐大氣污染物排放標準》) GB13271-2001.
- Air treatment capacity is calculated based on the results of acceptance and daily monitoring of boiler exhaust gas treatment facilities, ensuring that exhaust gas treatment facilities are in compliance with the requirements of emission standards and function properly.
- Actively respond to state initiative of emission reduction, and control the total air emission for the whole year based on the indicators for total air emission of the places where we operate.
- Materials such as documents and packaging materials to be incinerated shall be put into the boilers by the boiler operator for incineration treatment under the supervision of the QA staff. Non-compliant incineration is prohibited.

Treatment of exhaust gas generated during production

- Processes, rooms or equipment which generate dust during production shall be equipped with dust extractors. Exhaust gas collected and emitted shall be treated for dust removal through filtration or water curtain based on the conditions of process and production site.
- Production processes which generate toxic chemical gas shall be conducted in a confined space with no direct emission of the toxic chemical gas outside.

Treatment of exhaust gas generated by laboratories

- Toxic and harmful substances and reagents that are volatile and for laboratory use shall be sealed for storage, and those reagents that generate combustible volatile gases shall be stored in a safe ventilation cabinet.
- During the operations in an experiment, toxic and harmful reagents shall be sealed for prevention of volatilization, and operations with inevitable volatilization shall be conducted in a ventilation cabinet, the air outlet of which shall be far away from the working area of staff. The exhaust gas shall be emitted upon activated carbon absorption of toxic substance.

Case: Low-NOx burner technology

During the Year, Luye Pharma (Yantai Base) installed two gas-fired boilers. The new boilers adopt low-NOx combustion technology, which contributed to the decrease in boilers' emission of nitrogen oxides from the previous 150 mg/m^3 to 50 mg/m^3, greatly reducing the environmental impact caused by fumes generated during the production process.

Photo: New gas-fired boiler

Case: Use of gas-fired boilers in replacement for coal-fired boilers

In 2018, Luye Pharma (Sichuan Base) carried out renovation works on two coal-fired boilers in the area. In the process of combustion, coal combustion produces air pollutants such as sulfur dioxide, nitrogen oxides and particulates, causing a greater pollution to the environment. Water resources and electricity are also consumed by the desulfurization and dust removal facilities. The renovated gas-fired boilers are fueled by natural gas, realizing basically zero sulfur dioxide emission. The emission of nitrogen oxides and smoke and dust decreased by approximately 48% and 72%, respectively, as compared to that during the use of coal-fired boilers.

Photo: Gas-fired boiler

Case: Fight the uphill battle against air pollutants in autumn and winter

In order to facilitate green and quality corporate development and better fulfill its principal corporate responsibility on pollution treatment, Luye Pharma (Nanjing Base) has strictly implemented the pollution treatment program issued by the local government and signed the Undertaking to Fight the Uphill Battle against Air Pollutants in Autumn and Winter in 2018. It abides by laws and regulations in relation to environmental protection on its own initiative and is ready to receive supervision by the local government at any time.

南京绿叶制药有限公司
秋冬季大气污染防治攻坚承诺书

Photo: Undertaking to Fight the Uphill Battle against Air Pollutants in Autumn and Winter

Luye Pharma engages a professional environmental monitoring agency each year to conduct monitoring on major air pollutants emitted by our boilers and issue a formal monitoring report.

正本
检 测 报 告
Test Report

Photo: Monitoring Report on Exhaust Gas, Sewage and Noise

正本
检 测 报 告
Test Report

Photo: Monitoring Report on Sulfur Dioxide

Water Resources Management

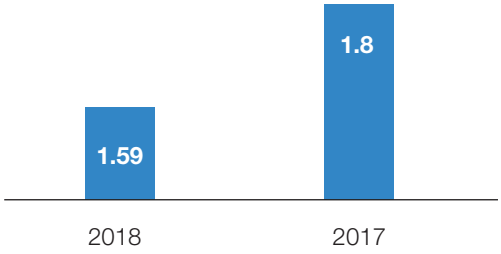
The population growth and social development has put human beings under increasing pressure in relation to water resources. The use of water of Luye Pharma mainly concentrates on industrial water used in pharmaceutical production and auxiliary equipment, and domestic water used for cleaning and cooking. Although Luye Pharma obtains water through municipal pipeline networks during operation process and therefore has no issue in sourcing water resources, we have still actively implemented a variety of measures on water saving and integrated water resources utilization.

Water saving

To save water, Luye Pharma implemented many measures on technology, management and education to improve the effective use of water resources and reduce waste of water. We have provided guidances on the use of drinking water, washing water, cleaning water, cooking water and domestic water by our employees in accordance with the "Management Procedures for Energy Resources of Luye Pharma" (《能源資源管理程序》), so as to raise their awareness of saving water. Luye Pharma's safety and environmental department will check and supervise the use of water by employees from time to time. Upon detecting any violation of the regulations by any department or individual, we will make comments and criticisms with internally announced punishment. On the contrary, the safety and environmental department will also reward those departments and individuals with outstanding performance in water saving.

Total water consumption in 2018
820,837 cubic meters

Intensity of total water consumption



(Cubic meter/income in RMB10,000)

Case: Steam condensate recycling technology

Luye Pharma (Yantai Base) assembles all steam condensate into the steam condensate storage tank in the antibody pilot workshop, which is delivered to every level of the workshop by the constant pressure water supply pump for household use. This saves 8m^3 of hot water every day, reducing heat emission and heat loss while saving water.

Photo: Steam condensate recycling technology

Sewage Management

Sewage discharge management is another focus of water resources management of Luye Pharma. Luye Pharma has developed management systems such as the "Management Procedures for Control of Wastewater Pollution" (《水體污染防治管理程序》) to manage and treat wastewater generated in our production activities, products or services, minimizing the adverse impacts of wastewater discharge on the surrounding environment and human health. All sewage generated by Luye Pharma are transported to sewage treatment station for treatment, and sewage shall not be discharged if untreated or below national or local standards for sewage discharge after treatment. Luye Pharma engages a professional environmental monitoring agency to conduct sample monitoring on water quality of our sewage outfall at least once each year.

Production wastewater discharge in 2018
2,979,799 tons

Case: Building sewage treatment station

Luye Pharma (Yantai Base) has built a sewage treatment station which can treat 1,000 m^3 of wastewater per day for the terminal treatment of sewage from the entire plant. The treated sewage could be discharged into the public sewage treatment system only if the contaminant level has significantly dropped and the chemical oxygen demand of the sewage is below 50 mg/L, so as to minimize the environmental impact.

Photo: Sewage treatment station

Waste Management

Waste management is an integral part of pollution prevention and control. We have developed the "Management Procedures for Prevention and Control of Pollution by Solid Wastes" (《固體廢物污染防治管理程序》) and the "Management Procedures for Waste" (《廢棄物管理程序》) to identify the hazardous and non-hazardous waste during our operations, and enhance the management of drug waste to prevent reuse of drug waste. Luye Pharma has applied the management philosophy of reducing waste, reusing waste and decontamination throughout the whole process of solid waste generation, collection, storage, transportation, usage and disposal.

Solid waste management

- Solid waste mainly includes hazardous waste and non-hazardous waste. Among them, hazardous waste mainly involves medical waste, organic liquid waste, organic resin waste and waste activated carbon, etc. Non-hazardous waste mainly includes domestic waste and recyclable waste, such as Chinese medicine dregs, waste packaging materials, etc. For the emission volume of various waste during the Year, please refer to the Environmental Performance as set out in the Appendix to the Report.

We have adopted the following measures in respect of waste management:

Waste collection and storage

- Classify and collect non-hazardous waste in a centralized manner, and designate the disposal of waste in corresponding garbage bins.
- Standardize the construction of hazardous waste temporary storage sites: we list clearly the nature of each dangerous solid waste and their corresponding dangerous characteristics. Hazardous waste warehouses use hollow cofferdam to prevent the risk of dangerous solid waste leakage outside warehouses and pollution on the surrounding environment. For flammable hazardous waste, we install explosion-proof facilities, such as combustible gas detectors and ventilation facilities, etc.
- Establish contingency disposal plan for hazardous waste. Enhance operators' contingency capability to deal with leakage incident, so as to reduce the impact on the environment.

Waste transportation and disposal

- Internal transfer: Use suitable packaging containers to prevent leakage, spillage, dripping or volatilization during loading, moving or transport. Well-trained operators will transport the waste to the temporary storage point by using specialized closed trucks.
- For hazardous waste, we commissioned nationally-recognized professional agency for handling disposal.
- For non-hazardous waste, we have signed an agreement on the disposal of domestic waste with the local environmental department, pursuant to which we will transport the waste every day to prevent environmental pollution due to excessive storage. General recyclable waste, such as packaging and obsolete equipment, will be collected to local recycling company. Medicine dregs will be disposed of by professional agency to make them into fermented fertilizer for harmless disposal.

Treatment of drug waste

- Expired drugs and the remaining test samples shall be temporarily stored by the quality control department for management, which shall be disposed of after notifying the safety and environmental department in advance to liaise with the drug waste disposal unit for disposal.
- R&D Centres shall be responsible for the storage of the drug waste generated by them, and they shall notify the safety and environmental department in advance to liaise with the drug waste disposal unit for disposal before disposing the waste.
- Recalled drugs, expired drugs in inventory or returned drugs shall all be temporarily stored in warehouses for registration and management, and shall be disposed of after notifying the safety and environmental department in advance to liaise with the drug waste disposal unit for disposal.
- All drug waste shall be properly packaged by the production department/workshop before transferring to the disposal unit.

Promotion and education

- Utilize both traditional and new social media to actively promote policies and measures on waste disposal and their effectiveness, which helps to create an atmosphere that facilitates waste disposal.
- Lead all employees to build up the concept of waste reduction and waste management. Increase every staff's awareness of waste classification and resources conservation and advocate green and healthy lifestyle through various ways of promotion and education.

Chemicals Management

Chemicals are being widely used in different medical areas. Luye Pharma advocates preventing and controlling the detrimental impact of industrial chemicals on human health and environment from the source and is committed to managing chemicals from dual angles of safety and environment. From the perspectives of safety and environmental protection, we have formulated the "Management Procedures for Dangerous Goods" (危險品管理程序) to impose strict management on dangerous goods, prevent and control leakage of dangerous goods, fire, poisoning, explosion accident and reduce the harm caused to human beings and adverse impact on the environment.

Chemical Environmental Management System

With the risk assessment and risk management of chemicals as the basic framework, we have established a number of basic environmental management systems for chemicals, such as environmental pollution control of chemicals, prevention and contingency plans for pollution accident, so as to control the risk to the environment and human health from hazardous chemicals.

Preventive Principle

Considering economic development, human health and environmental protection comprehensively, we adhere to the precautionary principle while developing and meeting our demand. When selecting raw materials, we would prefer using environmentally-friendly and non-toxic reagents than the toxic ones. When selecting suppliers, we carry out due diligence on the qualifications of suppliers, for example they are required to possess safety production license for dangerous chemicals, business license, safety registration system and road transport permits. We conduct a risk assessment on the storage site of chemicals and increase the capital investment in hardware equipment and facilities in aspects of fire prevention, explosion proof and anti-pollution.

Process Intervention Principle

The safety instructions (SDS) of chemicals provided by suppliers are displayed in the storage area. For newly introduced chemicals, we formulate specific preventive measures.

Case: Emergency drill for tank leakage in liquid waste area

In April 2018, Luye Pharma (Yantai Base) conducted an emergency drill for tank leakage in the liquid waste area in the raw materials workshop. In the drill, emergency treatment of liquid waste tank leakage and usage of fire extinguisher were included, through which our employees learnt the correct use of fire extinguisher, improved the ability of emergency handling for the tank leakage and have their environmental awareness raised.

Photo: Drill for liquid waste leakage

Engagement in Environmental Activities

During the Year, Luye Pharma organized various environmental activities for the staff to participate in, such as tree planting and street cleaning, in a hope that their awareness of environmental protection could be enhanced through various after-work activities.

Case: Tree planting activity

In March 2018, Luye Pharma organized the activity of transplanting horse chestnuts. Horse chestnuts mean a lot to us, as active ingredient in our major products including "Maitongna" (麥通納), "Okai" (歐開) and "Olai" (歐萊) is extracted from fruits of this tree. We also engaged our staff to participate in other tree planting activities, through which the surrounding area of the production base has been afforested while enhancing the awareness of environmental protection of our staff.

On the scene of tree planting

Case: City beautification and education activity of environmental awareness

In April 2018, the staff of Luye Pharma (Sichuan Base) organized an activity about city beautification and environmental awareness. By picking up rubbish and cleaning up streets, our staff conveyed a message of good citizenship in protecting the environment to the public.

Pick up rubbish and clean up streets

Occupational Health and Safety

Luye Pharma has established an integrated and all-rounded occupational health and safety management system and acquired OHSAS 18001:2007 and ISO 45001:2018 occupational health and safety management system certifications. In the business development and operation, we regard the pursuit of excellence and service for human health as a noble mission and prevent proactively any accident that could potentially harm our staff, contractors or nearby residents.

ISO 45001:2018 certification

OHSAS 18001:2007 certification

The safety goal of Luye Pharma is to achieve zero damage, zero fire hazards and zero explosions in our business operations. We strictly abide by the national and local laws and regulations relating to occupational health and safety, and have developed a series of internal policies governing occupational health and safety. During the Year, the Group has complied with the applicable laws and regulations that are significant to Luye Pharma relating to providing a safe working environment and protecting employees from occupational hazards, and has recorded neither material safety accident nor fatal work injury.

Laws and regulations relating to occupational health and safety that Luye Pharma abided by (including but not limited to)	Internal policies of Luye Pharma (including but not limited to)
• Production Safety Law of the People's Republic of China (中華人民共和國安全生產法) • Fire Protection Law of the People's Republic of China (中華人民共和國消防法) • Regulations on Safety Supervision over Special Equipment (特種設備安全監察條例) • Provisions on Safety Management of Dangerous Chemicals (危險化學品安全管理條例)	• Production Safety Inspection System (安全生產檢查制度) • Administration Procedure of Personal Labor Protection Articles (個人勞動防護用品管理程序) • Mechanical Protection Safety Procedure (機械防護安全程序) • Fire Management System (消防管理制度) • EHS Education And Training Policy (EHS教育與培訓制度) • Electrical Safety Protection Procedure (電氣安全防護程序) • Accidents and Hazards Screening and Governance System (事故隱患排查治理制度)

Each subsidiary of Luye Pharma has established a safety management committee under the occupational health and safety management system for decision-making and management of safety affairs in the Company. The functional structure of safety management committee of Luye Pharma (Yantai base) is shown as below:

General Manager	• Fully responsible for the safety of the Company.
Safety and Environmental Protection Department	• The safety department of the Company, responsible for daily company-level safety inspection and hazards ratification and supervision. • Organize a production safety inspection each month, fill in "Production Safety Routine Checklist" (《生產安全例行檢查表》) (and "Hazards Rectification Notice" (《隱患整改通知書》) if any safety hazard is found during inspection) and dispatch the form(s) to the responsible department. • Carry out risk classification control of occupational health and safety, monitor the implementation of risk management measures and keep track of the effectiveness.
Department Head	• Responsible for safety affairs of respective department under the management and guidance of safety management committee and safety and environmental protection department. • Implement safety measures including daily safety hazards' inspection, rectification and safety training. • Identify occupational health and safety risks of respective department.

The work procedure of safety risk classification control includes key controlling sections such as screening out risk points, identification of the sources of danger and carrying out the risk assessment, risk classification control and updates.

Screening out risk points	• Identify risk points throughout the production process, including basic information such as location, name of the risk, and potential types of the accident. • Screen out risk points and set up risk screening ledger.
Identification of the sources of danger	• Pursuant to the "Classification and code of hazardous and harmful factors in production process" (《生產過程危險和有害因素分類與代碼》) (GB/T13861), identify sources of danger from four aspects, namely the human factor (people's unsafe behavior such as operation against rules), object factor (safety protection facilities, safety technology, etc.), management factor and environmental factor (dust and noise, etc.). • Develop a detailed safety checklist for work system and equipment use. With reference to relevant laws and regulations, technical standards and other requirements, formulate inspection standards as the review criteria.
Carry out the risk assessment	• Three states should be considered in identifying the sources of danger: normal, abnormal and emergent. • Pursuant to the "Classification and code of hazardous and harmful factors in production process" (GB/T13861), carry out risk assessment on the classification under four risk factors, namely human, object, management and environment. • Assess potential accidents that are classified under 20 categories according to the "Classification of Work-Related Accidents" (《企業職工傷亡事故分類標準》) (GB6441), such as object strike, mechanical injury, etc.
Risk classification control	• Conduct risk control with line responsibility and classification. • Tier-one risk (red): major risk, controlled and managed by the Company; • Tier-two risk (orange): higher risk, controlled and managed by the workshops; • Tier-three risk (yellow): general risk, controlled and managed by teams; • Tier-four risk (blue): low risk, controlled and managed by staff.
Updating identification of the sources of danger and risk assessment	• Luye Pharma conducts reassessment on the safety risk when there are changes in the production activity or workplace and the facilities of Luye Pharma, or other factors such as relevant laws and regulations. • Organize and update the identification of the sources of danger, eliminate dangers that no longer exist and supplement dangers that newly arise.

All employees and contractors of Luye Pharma and the staff of its joint venture should strictly comply with our safety rules and regulations. To achieve these, we believe that it is important to create a safety culture, which enables employees to understand their work responsibilities. The management team of Safety Department of Luye Pharma holds meetings each quarter, aiming to share experience, communicates and discuss the best practices to enhance safety performance.

As the mental health of staff is also essential, we established a psychological advisory committee where private communications with staff take place so as to relieve their psychological stress. Meanwhile, we arrange the work schedule reasonably to ensure rest time for employees. To alleviate the life and psychological stress for our staff, we also organize abundant activities for employees with competitive welfare package.

Case: Drill to handle fire explosion on-site

In January 2018, Luye Pharma (Sichuan Base) and the fire brigade under local public security jointly organized an on-site fire rescue practice and emergency evacuation drill, involving all staff of Sichuan Base. Through this fire safety drill, the employees of the Company deepened their understanding of self-rescue and means of escape in case of fire accident and ensure they learnt the proper operation of fire equipment, thereby strengthened the assurance of staff safety.

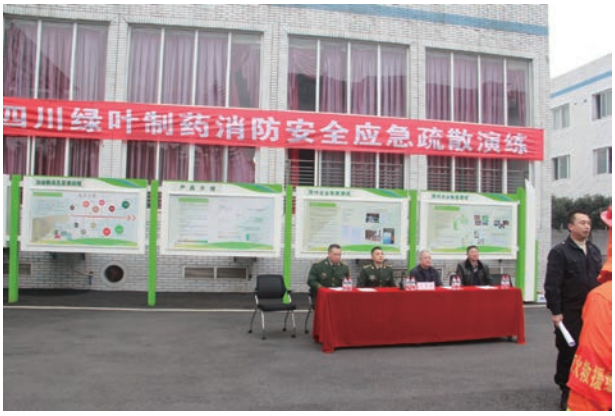


Photo: On-site fire drill

Case: Comprehensive drill for emergency plan, fire-fighting and environmental protection

In August 2018, Luye Pharma (Nanjing Base) conducted a comprehensive drill for safety, environmental protection and fire-fighting. The drill process was carried out without emergency plan, during which, the safety and environment department arranged designated staff to check the condition of outfits and the intact rate of the equipment, conducted the training of basic theoretical knowledge of safety, environmental protection and fire-fighting as well as organized a drill practice for participants.

Photo: Training class on theoretical knowledge

Case: Improvement of occupational health environment in workshops

In 2018, additional air suction devices for mixing tank were purchased for workshops in Luye Pharma (Nanjing Base) to enhance the ventilation in the workshops and improve the work environment at the site. To reduce the occupational health and safety risk, the occupational protective equipment at the site were updated.

Photo: Air suction device for mixing tank

Case: Training provided for visitors at the entrance of production base

In August 2018, Luye Pharma (Beijing Base) provided safety training for visitors at the entrance of production base, where they understand safety risks and precautions in the factory.

Photo: Safety training before entering the site

Photo: Drill for handling hazardous chemicals leakage at Beijing Base

Photo: Fire-fighting drill at Sichuan Base

Caring our Talents

"Staff Achievement" is Luye Pharma's business philosophy and we treat staff as the most valuable asset. We adopt proactive human resource policy and have created a diversified platform for occupational training as well as multiple channels for career development paths so as to attract and retain outstanding talents.

Material Topics included in this chapter

- Occupational health and safety system
- Compensation and benefits for employees
- Training and career development for employees
- Employee recruitment policy
- Safe production and emergency procedure

Talents Management

In order to ensure a team of talents is built, Luye Pharma adopts a proactive human resources policy to attract and retain outstanding talents from home and abroad. During the Year, Luye Pharma has complied with the applicable laws and regulations that are significant to Luye Pharma in relation to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. Luye Pharma aims at creating cultural compatibility among its companies, such that employees could realize their potentials and show their talents, and companies could achieve outstanding performance, so as to contribute back to shareholders, society and employees. Our recruitment management system is shown below:

Labor force employment

- Recruitment:
  We strictly abide by the laws and regulations relating to employment, such as the Labor Law of the People's Republic of China (中華人民共和國勞動法), the Law of the People's Republic of China on Employment Contracts (中華人民共和國勞動合同法), the Employment Promotion Law of the People's Republic of China (中華人民共和國就業促進法) and the Contract Law of the People's Republic of China (中華人民共和國合同法), with an aim to establish an all-rounded human resources system. Meanwhile, Luye Pharma strictly complies with the Provisions on the Prohibition of Using Child Labor (禁止使用童工規定) by verifying the identification of the applicants to resolutely refuse the hiring of child labor in the process of recruitment and employment.

- Labor:
  With regards to the recruitment, career development, promotion, training and incentives, we are willing to provide equal employment opportunity irrespective of color, nationality, race, age, sex, religious beliefs or physical disability. Moreover, we resolutely reject the use of child labor and prohibit forced labor and are in strict accordance with the national laws and regulations on employment.

- Dismissal:
  If staff fails to pass the probation period, or Luye Pharma incurs significant loss or is involved in accident as a result of serious violation of discipline or dereliction of duty, Luye Pharma shall terminate the labor contract with the staff, give notice to employees and claim for compensation in accordance with applicable laws and regulations.

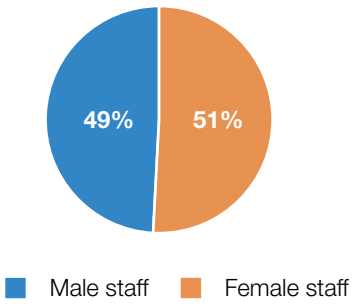
Remuneration

- Remuneration:
  Luye Pharma provides competitive remuneration package. We regularly participate in the annual salary survey for domestic pharmaceutical market organized by the world well-known salary research companies, from which we understand the overall salary level, current condition and development trend of pharmaceutical market. In accordance with its development strategies, Luye Pharma formulated an overall remuneration strategy, ensuring that it is able to attract, motivates and retain talents. Meanwhile, in respect of the remuneration structure, we determine the remuneration level of employees through a performance-based assessment system and by referencing three aspects, namely level of market rates, job responsibility and employees' performance.

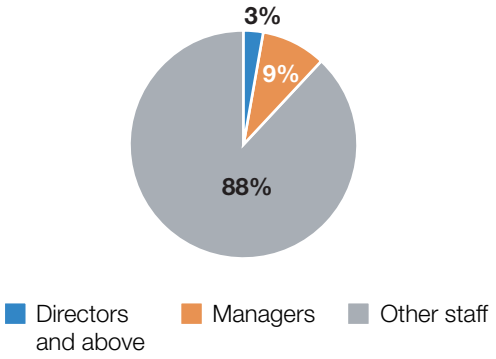
Working hours and holidays	• Working Hours: 40 hours per week, Saturdays and Sundays are rest days. • Holidays: Besides public holidays, Luye Pharma offers paid annual leave, marriage leave, maternity leave, sick leave, etc., to ensure employees strike a balance between work and life.
Employee development	• To formulate a talent development plan and set up a dual-pathway development system for the employees.

Luye Pharma always takes a fair and impartial attitude towards every employee. It concerns the equality between men and women, and has been committed to maintaining equal proportions for both men and women. As at the end of 2018, Luye Pharma has a total of 4,405 employees. The number/percentage of employees by gender, employment type, age group and geographic region is indicated below:

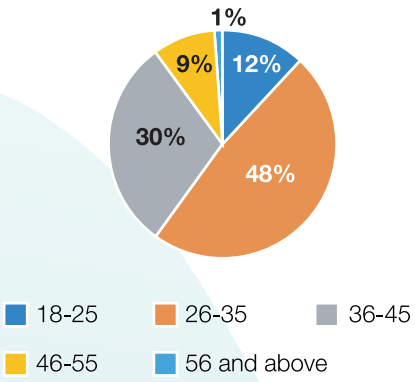
Percentage of employee by gender



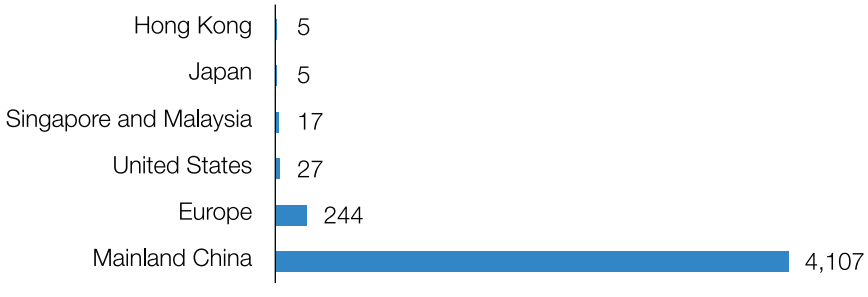
Percentage of employee by employment type



Percentage of employee by age group



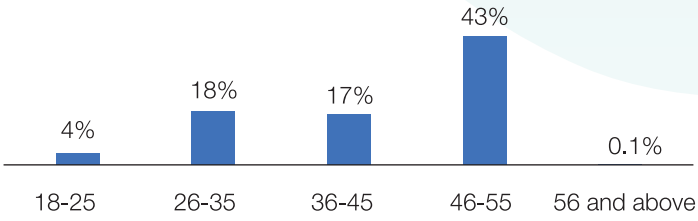
Number of employee by geographic region



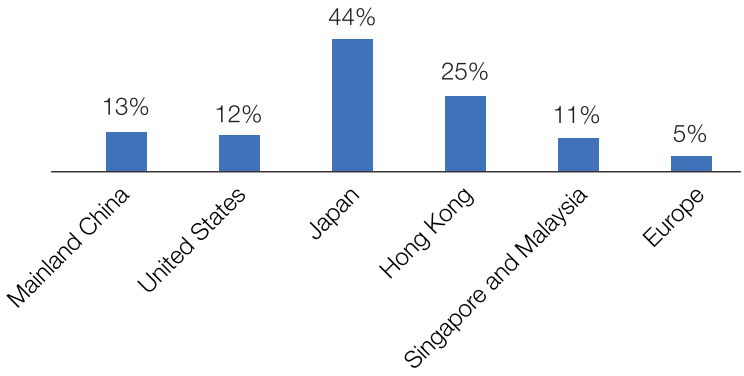
In addition, Luye Pharma derived our employee turnover rate by gender, age group and geographic region during the Year through statistical analysis:

Employee turnover rate by gender

Employee turnover rate by age group



Employee turnover rate by geographic region



Staff Training

In order to maintain stable development of the talents, Luye Pharma has established multi-channel career development paths such as research and development, professional technology and management. Luye Pharma encourages employees to choose their own promotion and career development path, to realize their potential and to achieve the sustainable development of the staff and the enterprise.

We have developed the "Management Procedures for Capacity, Training and Awareness" (《能力、培訓和意識管理規程》) in accordance with Pharmaceutical Products GMP Guidance: Quality Management System (《藥品GMP指南：質量管理體系》), which summarizes the principles for business knowledge training for all staff and training on GMP and pharmaceutical management regulations, and have stipulated the formulation of training program and its contents, including induction training for new staff, relevant training for production and quality staff, safety knowledge training and training on pharmaceutical management laws and regulations. Staff training and assessment are enhanced to ensure that they can meet job requirements and to enhance their awareness of quality, environment and occupational health and safety.

Quality Assurance department	• Responsible for the formulation of training management documents and supervision on and self-check of training system.
Human Resource department and Administration department	• Responsible for the construction of the Company's training system, organization and implementation of company-level training, and provide relevant support for internal training of each department. • Collecting and reviewing staff safety management files.
Training Manager of Quality Assurance department	• Responsible for the management of training system. Duties include monitoring the implementation of training plan, reviewing courses and teaching materials, and reviewing the qualifications of internal teachers.
Training Manager of each departments	• Responsible for the management of department training, and undertake the implementation of internal training and fulfilling the need of training. Specific duties include organization and implementation of department internal training, development training courses and teaching materials and issuing "Position Qualification Certificate" to employees who have attained qualification for their position.
EHS department manager	• Responsible for reviewing EHS annual training plan of the Company.
Quality manager and Production manager	• Responsible for the approval of annual training plan of the Company. • Responsible for the approval of internal teachers' qualifications.

In order to promote staff training effectively, we set up the "Luye Evergreen College" for classification and cultivation of international talents, backup management talents, existing management talents and professional talents. Various types of trainings of Luye Pharma are presented as follows:

Training for university graduates of the current year

- Include targeted training such as outward bound, corporate culture and regulatory system and general quality courses. A two-year plan for follow-up and cultivation is designed after enrollment.

Induction training for new employees

- Provide online and offline learning courses, and arranging experienced staffs as mentors to guide the work of new employees.

Incremental training for employees

- Internal teachers provide immediate training and guidance during work to provide employees with on-the-job learning experience for job skills improvement.

Job skills training

- Provide diversified training opportunities, including internal training, external open courses, industrial summit forum and part-time MBA/EMBA, for employees of all levels.

Management skills training

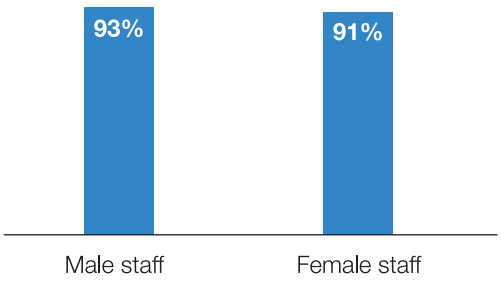
- Appoint internal and external experts to regularly provide management ability and leadership training for management personnel.

Part-time education and training

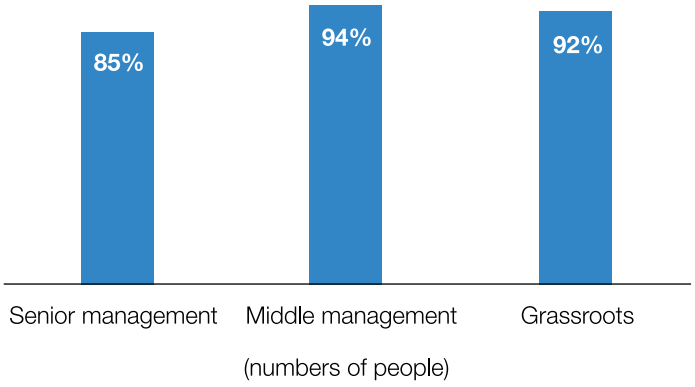
- Arrange qualified employees to participate in long-term training projects and part-time degree education.

The following is the statistic on staff's training:

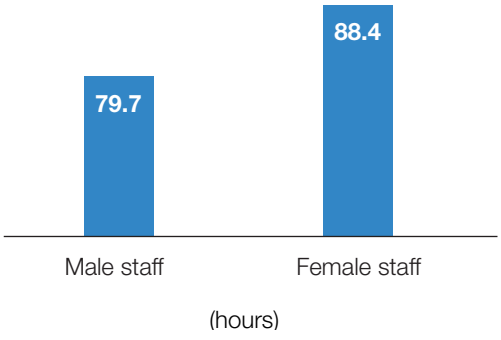
Percentage of employees trained by gender



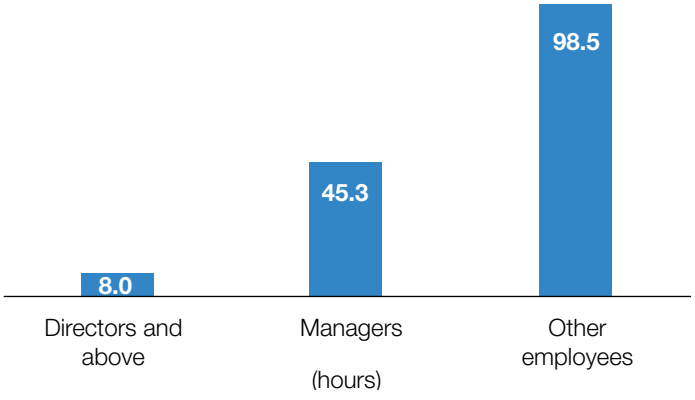
Percentage of employees trained by employment type



Average training hours completed per employee by gender



Average training hours completed per employee by employment type



Case: EHS knowledge competition

In order to promote EHS knowledge for universal education purpose and raise EHS awareness of all employees, Luye Pharma (Yantai Base) held a EHS knowledge competition under the theme of "promoting environmental health and safety knowledge" in November 2018.

Photo: EHS knowledge competition

Case: GMP management training

In order to improve GMP management level of the workshops, we actively organized various learning activities about regulations during the Year. In March 2018, workshop management and technical staffs voluntarily attended a seminar on Appendix 1 to EU-GMP. In September 2018, we arranged a seminar on "Collection and Reporting Guidance Principle (questionnaire opinion manuscript) for Adverse Reaction on Individual Pharmaceutical Products'" (《個例藥品不良反應收集和報告指導原則(徵求意見稿)》), "Sterilization and Filtration Technology and Application Guidance" (《除菌過濾技術及應用指南》) and "Aseptic Process Simulation Experiment Guidance (Aseptic Preparations)" (《無菌工藝模擬試驗指南(無菌製劑)》) to share learning experience, and put forward improvement measures having taking into account the actual conditions of workshops and implement them to ensure the manufacturing operation of the workshops complies with laws and regulations.

Photo: GMP management training

Employees' Welfare

As our employees are one of the most valuable assets of our Group, Luye Pharma makes ongoing efforts on enhancing employees' benefits in order to achieve the win-win target of both a healthy lifestyle and happy work.

This Year, apart from the basic welfare prescribed by the PRC, Luye Pharma also provided employees with a variety of other benefits and organized various staff activities, to enrich their lives during spare time and strengthen their bond and team cohesion.

- Holiday Welfare: The Company offers holiday welfare during some traditional holidays such as Spring Festival, International Women's Day, International Children's Day;
- Commercial Insurance: Inpatient and outpatient medical insurance, 24-hour personal accident insurance and critical disease insurance are included to enhance the health insurance coverage of the employees without worries behind;
- Annual Health Check: Health check is organized each year and a health record is set up for each employee;
- Employee Mutual Support Plan: A mutual support fund is set up by to provide relief for employees and their families who suffer from major accidents and family misfortunes besides basic benefits and commercial insurances, helping them get through difficulties;
- Wedding Cash Gift: Wedding cash gift is prepared for all the newly-weds;
- Excellent Performance Commendation: An annual commendation meeting is held each year both at the Group level and company level to award employees and teams with excellent performances;
- Gold Leaf Medal: A gold leaf medal is granted to employees who have served the Company for ten years.

Case: Social Practice and Science Activities for Employees' children

Since the second half of 2018, Luye Pharma has launched the "Luye Discovery Tour", a series of social practice and scientific activities for employees' children. Aiming to make full use of the resources and business of Luye Pharma, the tour is designed to create a unified platform of experience programmes for the small Luye people to stimulate their interest of scientific exploration and enhance their understanding of Luye Pharma and the parents' work through observation, learning, experience and interaction within the Company. In the second half of 2018, we organized three activities including "Luye Discovery Tour to the R&D Center", "Luye Discovery Tour to the Pula Valley", "Exploring the Jiaodong Theater (探秘膠東劇院)" which were successfully held in August, September and November respectively. All activities were welcomed by the small Luye people.

Photo: An activity in the Luye Discovery Tours series

Case: The 2nd Dance Competition (舞林大會)

In June 2018, the 2nd Dance Competition of Luye Pharma was held in Yantai. Dancers from different regions gathered at the stage of the dance competition and danced for the 24th anniversary of Luye Pharma.

Photo: The 2nd Dance Competition

Case: Basketball Match (「魅力籃球，精彩我秀」籃球賽)

In October 2018, Luye Pharma held a basketball match in Luzhou, Sichuan, and engaged more than 100 employees from all over the world to participate in the competition.

Photo: Basketball Match

Social Responsibility

Besides actively improving internal management through systematic management of research and development, product and service quality, environment, and labor, Luye Pharma hopes to advocate the concept of sustainable development to a broader level and promote the sustainable development of society with different parties by using the influence of the Company.

Material Topics covered in this section

- Supplier selection and management

Supply Chain Management

Owing to our continuous growth and gradual globalization of pharmaceutical manufacturing business, we are inevitably facing risks relating to environmental and social problems in supply chains. In the process of equipment and raw material procurement and drugs manufacturing commission, we continue to review our suppliers and manage suppliers through different aspects including quality, environment and social performance, so that Luye Pharma can produce quality and safe medicines as environmentally-friendly as possible.

Luye Pharma has formulated the "Management Procedures for Suppliers and Related Parties" (《供方及相關方管理程序》), the "Management Regulations on Appraisal and Assessment of Supplier's Overall Performance" (《供應商整體表現評價與評估管理規程》), "R&D Drug Commissioning Production Management Procedures" (《研發藥品委託生產管理規程》) and other internal policies, in a bid to ascertain and evaluate the performance of suppliers, contractors and related parties on environmental, safety status and product quality for better performance, thereby together promoting the sustainable development of society.

Supplier selection practices:

These focus on reviewing suppliers' operation management level, market position, product functions, quality assurance and testing capabilities, compliance with laws and regulations, EHS management performance, and intellectual property concepts. Suppliers are selected and engaged based on their performance.

Evaluation and monitoring practices:

- Comprehensively assess and evaluate the quality of materials provided by suppliers according to production technologies, qualification data and supplier audit.
- Comprehensively assess and evaluate the prices of material supplied by suppliers according to market conditions and supply and demand.
- When purchasing products that involve intellectual property rights, the intellectual property department evaluates the intellectual property rights with the suppliers, and if necessary, requires the suppliers to provide the intellectual property ownership certificates, and conducts assessment and evaluation on suppliers' intellectual property status each year.
- Comprehensively assess and evaluate the overall performance of suppliers including environmental and safety status, sales and after-sales service.
- Comprehensively assess and evaluate the overall performance of suppliers based on the communication and cooperation with suppliers during the Year, including the quality, price, credibility, timely delivery rate, sales (including the verification of transportation methods, intactness of packaging, etc.) and after-sales service (technical support, timeliness of quality rectification, etc).

Distribution of domestic and overseas suppliers:

Number of domestic suppliers
5,520

Number of overseas suppliers
156

Operating with Integrity

Insisting in operating with probity and upholding the principle of fair market, Luye Pharma strictly abides by the Criminal Law of the People's Republic of China (《中華人民共和國刑法》), the Law Against Improper Competition (《反不正當競爭法》) and other laws and regulations, and has developed the Code of Conduct for Employees (《員工行為準則》), the Anti-fraud System of Luye Pharma Group Ltd. (《绿叶制药集團反舞弊制度》) and other internal policies. An anti-fraud supervisory committee has been set up by Luye Pharma to strictly prohibit and monitor any bribery, extortion, fraud and money laundering behaviors. The Code of Conduct for Employees of Luye Pharma states clearly: employees are prohibited to provide, give, obtain or accept any type of improper payments, gifts or inducement directly or indirectly and to extort or rebate to/from anybody or any organization by abusing authority. In order to encourage reports of malpractice, Luye Pharma provides internal reporting channels, such as hotline and e-mail box, to ensure effective supervision and prevention of bribery and fraud.

During the Year, Luye Pharma has complied with the applicable laws and regulations that are significant to the Group in relation to bribery, extortion, fraud and money laundering, and has not been involved in any corruption-related litigation.

Public Welfare

While focusing on business development, we take the initiative to undertake the responsibility as a corporate citizen. "Support education, encourage innovation" is the direction the Group always upholds to in the aspect of charity. During the Year, we focused on areas such as giving support to patients and education, promoting respect for the elderly and health, and continued to contribute to the community by actively participating in social activities and helping the needy. In the future, we will consider to incorporate public welfare into the Company's development strategy to plan community investment more effectively and devote more efforts to promoting mutual development of enterprises and society.

Case: Elderly Home Visit Activity

In April 2018, Luye Pharma (Sichuan Base) engaged employees for an elderly home visit activity in Yutang Town and offered new clothes, milk, fruits and daily necessities to the elderlies. Our employees also gave care and warmth to the elderlies through a series of activities such as tidying up their rooms and cleaning the bathrooms.

Photo: Elderly Home Visit Activity

Case: Liposome Patient Assistance Program

In May 2018, the Liposome Patient Assistance Program (助力前行—力撲素患者援助項目), jointly initiated by the Beijing Health Alliance Charitable Foundation and Luye Pharma, was launched in Xi'an. The program is designed to aid and assist cancer patients in need by giving them the opportunity to receive timely, standardized and effective treatment, alleviating their financial burden and improving their quality of life. Luye Pharma has donated Liposome, a medicine for chemotherapy, to the foundation at nil consideration and is expected to cover approximately 2,000 patients, involving the provision of drugs worth approximately RMB30 million.

Photo: Liposome Patient Assistance Program

Case: Luye Pharma (Nanjing Base) was named Outstanding Contributor in the "Being with You" charitable activity to fund poor students in 2018 (「2018和你在一起助學圓夢」公益行動)

In August 2018, the general manager of Luye Pharma (Nanjing Base) attended the donation ceremony of the"Being with You" charitable activity to sponsor poor students (「和你在一起助學圓夢」公益行動). Jointly initiated by the Jiangsu Women's Federation (江蘇省婦聯), the Jiangsu Children Welfare Foundation (江蘇省兒童福利基金會), and the News Centre of Media Convergence of Jiangsu Broadcasting Corporation (江蘇廣電總台融媒體新聞中心), this charitable program aims at helping children in need by solving their living and learning difficulties. Luye Pharma (Nanjing Base) and the Jiangsu Children Welfare Foundation have jointly launched the Charity Program for Orphans and Students in Old Revolutionary Base Areas for ten years. This year, we made a donation of RMB100,000 additionally to poverty alleviation and sick and disabled children's assistance project.

Case: Donation for Education Grants

In May 2018, as usual, the children of Beijing WPU Hope Primary School received the school supplies and brand new beds and bedclothes from the employees of Beijing subsidiary of Luye Pharma. The employees of Beijing Subsidiary have persisted in visiting the school and bringing life and school supplies to the children each year since the Sichuan earthquake ten years ago. In addition, Luye Pharma continued to fund several projects of education grants in the Year, including: Luye Biomedical Innovation Fund at Peking University (北京大學绿叶生物醫藥創新基金), Luye Scholarship for Medical Department of Peking University (北京大學醫學部绿叶獎助學金) , "Luye Pharma Scholarship" for School of Pharmacy of Yantai University (煙台大學藥學院「绿叶製藥獎學金」), Peking University Sunshine Fund • Love Bursary (北京大學陽光基金•愛心助學金) , Peking University WPU Medical Education Award (北京大學維信醫學教育獎), Luye Education Aid Fund for College Students (绿叶大學生助學基金), Helping the Poor Students and Orphans (革命老區助學助孤愛心計劃), Luye Love Bursary for Laishan District, Yantai City (煙台市萊山區绿叶愛心助學金), etc.

Photo: Donation for Beijing WPU Hope Primary School

Case: "LUYE Cup" Half Marathon

In October 2018, "LUYE Cup" The Seventh Half Marathon in Laishan District, sponsored by Luye Pharma, was successfully held. To promote health awareness, Luye Pharma has been sponsoring the Laishan Half Marathon since 2013. The "LUYE Cup" Half Marathon has become a well-known local sports brand, attracting tens of thousands of athletes each year. Luye Pharma has been sponsoring RMB150,000 to the event annually for five consecutive years.

Photo: "LUYE Cup" The Seventh Half Marathon

Appendix

Environmental Performance

	Data in 2018[1]	Data in 2017	Measurement unit
Resource consumption			
Total electricity consumption	51,031,051	41,976,153	kWh
Intensity of electricity consumption	98.6	110.0	kWh/income of RMB10,000
Total natural gas consumption	3,166,567	2,421,560	Cubic meters
Intensity of natural gas consumption	6.1	6.3	Cubic meters/income of RMB10,000
Total industrial steam consumption	60,691	72,064	MKJ
Intensity of industrial steam consumption	0.12	0.19	MKJ/income of RMB10,000
Total gasoline consumption (by automobiles)	38,416	37,321	Liters
Intensity of gasoline consumption (by automobiles)	3,201	3,110	Liters/per gasoline-powered automobile
Total diesel consumption (by automobiles)	6,592	6,266	Liters
Intensity of diesel consumption (by automobiles)	3,296	3,133	Liters/per gasoline-powered automobile
Total water consumption	820,837	672,428	Cubic meters
Intensity of total water consumption	1.6	1.8	Cubic meters/income of RMB10,000
Packaging materials consumption	1,579	—	Tons
Intensity of packaging materials consumption	0.003	—	Tons/income of RMB10,000
Emission of air pollutants by boilers			
CO emission	4,154	3,239	Kilograms
NO_x emission	4,946	2,316	Kilograms
SO_x emission	29.7	23.1	Kilograms
$PM_{2.5}$ emission	376	293	Kilograms
Emission of air pollutants by automobiles			
CO emission	443	433	Kilograms
NO_x emission	279	284	Kilograms
SO_x emission	0.68	0.66	Kilograms
$PM_{2.5}$ emission	11.2	11.4	Kilograms
PM_{10} emission	12.4	12.6	Kilograms

1 Since Lyue Pharma's production in 2018 is higher than that in 2017, certain resource consumption and emissions increased as compared to 2017.

2 In 2018, Lyue Pharma's revenue was approximately RMB5,173.39 million.

	Data in 2018	Data in 2017	Measurement unit
Emission of greenhouse gas (scope I and scope II)			
Emission by use of boilers (scope I)	6,820	5,236	Tons
Emission by automobiles (scope I)	107	104	Tons
Emission by electricity consumption (scope II)	42,157	34,471	Tons
Emission by refrigerants	2,177	1,297	Tons
Greenhouse gas emission in total	51,262	41,109	Tons
Intensity of greenhouse gas emission in total	0.10	0.11	Ton/income of RMB10,000
Production wastewater discharge (processed)			
Production wastewater discharge	326,668	375,433	Tons
Intensity of production wastewater discharge	0.63	0.98	Ton/income of RMB10,000
Non-hazardous waste produced			
Medicine dregs produced	1,334	893	Tons
Medicine dregs recycled	1,176	—	Tons
Intensity of medicine dregs produced	0.0026	0.0023	Ton/income of RMB10,000
Packaging materials waste produced	29.0	39.0	Tons
Packaging materials waste recycled	16.5	—	Tons
Intensity of packaging waste materials produced	0.000056	0.00010	Ton/income of RMB10,000
Hazardous waste produced			
Medical waste produced	12,101	20,907	Kilograms
Intensity of medical waste produced	0.023	0.055	Kilogram/income of RMB10,000
Organic waste liquid produced	195,000	136,497	Kilograms
Intensity of organic waste liquid produced	0.38	0.36	Kilogram/income of RMB10,000
Organic resin waste produced	500	780	Kilograms
Intensity of organic resin waste produced	0.0010	0.0020	Kilogram/income of RMB10,000
Waste activated carbon produced	4,522	4,212	Kilograms
Intensity of waste activated carbon produced	0.0087	0.011	Kilogram/income of RMB10,000
Waste toner cartridge produced	308	130	Unit
Intensity of waste toner cartridge produced	0.00060	0.00030	Unit/income of RMB10,000
Waste fluorescent tube produced	45	15	Unit
Intensity of waste fluorescent tube produced	0.000087	0.000040	Unit/income of RMB10,000

Social Performance

Safety

Death toll	Employee	0	Number of people
	Subcontractor	0	Number of people
Accidental work injuries	Work-related fatalities	0	Number of people
	Lost days due to work injury	0	Days

Employees

		Percentage	Turnover rate
Total number of people		4,405	10%
Gender distribution	Male	49%	11%
	Female	51%	10%
Rank distribution	Directors and above	3%	—
	Managers	9%	—
	Other employees	88%	—
Age distribution	18–25	12%	4%
	26–35	48%	18%
	36–45	30%	17%
	46–55	9%	43%
	56 and above	1%	0.1%
Region distribution	Mainland China	93%	13%
	United States	1%	12%
	Japan	0.1%	44%
	Hong Kong	0.1%	25%
	Singapore and Malaysia	0.4%	11%
	Europe	6%	5%
Percentage of employees completed training			
Gender distribution	Male	93%	
	Female	91%	
Rank distribution	Directors and above	85%	
	Managers	94%	
	Other employees	92%	
Average training hours completed per employee			
Gender distribution	Male	80 hours	
	Female	88 hours	
Rank distribution	Directors and above	8 hours	
	Managers	45 hours	
	Other employees	98 hours	

ESG Report Content Index

A. Environmental			
Item		**Descriptions**	**Related sections in the Report**
Aspect A1: Emissions			
General Disclosure		Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	Environmental Protection
Key Performance Indicator (KPI)	A1.1	The types of emissions and respective emissions data	Environmental Performance
	A1.2	Greenhouse gas emissions in total and, where appropriate, intensity	Environmental Performance
	A1.3	Total hazardous waste produced and, where appropriate, intensity	Environmental Performance
	A1.4	Total non-hazardous waste produced and, where appropriate, intensity	Environmental Performance
	A1.5	Description of measures to mitigate emissions and results achieved	Environmental Protection
	A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	Environmental Protection
Aspect A2: Use of Resources			
General Disclosure		Policies on effective use of resources	Environmental Protection
KPI	A2.1	Direct and/or indirect energy consumption by type in total and intensity	Environmental Performance
	A2.2	Water consumption in total and intensity	Environmental Performance
	A2.3	Description of energy use efficiency initiatives and results achieved	Environmental Protection
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	Environmental Protection
	A2.5	Total packaging material used for finished products and, if applicable, with reference to per unit produced	Environmental Performance
Aspect A3: The Environment and Natural Resources			
General Disclosure		Policies on minimizing the issuer's significant impact on the environment and natural resources	Environmental Protection
KPI	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	Environmental Protection

B. Social			
Item		**Descriptions**	**Related sections in the Report**
Aspect B1: Employment			
General Disclosure		Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to remuneration and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination and other benefits and welfare	Talent Management Employees' Welfare
Recommended Disclosures	B1.1	Total workforce by gender, employment type, age group and geographical region	Talent Management Social Performance
	B1.2	Employee turnover rate by gender, age group and geographical region	Talent Management Social Performance
Aspect B2: Health and Safety			
General Disclosure		Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to provision of a safe working environment and protection of employees from occupational hazards	Occupational Health and Safety
Recommended Disclosures	B2.1	Number and rate of work-related fatalities	Occupational Health and Safety Social Performance
	B2.2	Lost days due to work injury	Social Performance
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	Occupational Health and Safety

Aspect B3: Development and Training			
General Disclosure		Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	Employee Training
Recommended Disclosures	B3.1	The percentage of employees trained by gender and employment category (e.g. senior management, middle management)	Employee Training Social Performance
	B3.2	The average training hours completed per employee by gender and employment category	Employee Training Social Performance
Aspect B4: Labor Standards			
General Disclosure		Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to prevention of child labor or forced labor	Talent Management
Recommended Disclosures	B4.1	Description of measures to review employment practices to avoid child and forced labor	Talent Management
	B4.2	Description of steps taken to eliminate such practices when discovered	No Relevant Situation
Aspect B5: Supply Chain Management			
General Disclosure		Policies on managing environmental and social risks of the supply chain	Supply Chain Management
Recommended Disclosures	B5.1	Number of suppliers by geographical region	Supply Chain Management
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	Supply Chain Management

Aspect B6: Product Responsibility			
General Disclosure		Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress	Drugs Manufacturing Management Product Sales and Customer Service Management Protection of Intellectual Property Rights
Recommended Disclosures	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	Drugs Manufacturing Management
	B6.2	Number of products and service related complaints received and how they are dealt with	Product Sales and Customer Service Management
	B6.3	Description of practices relating to observing and protecting intellectual property rights	Protection of Intellectual Property Rights
	B6.4	Description of quality assurance process and recall procedures	Drugs Manufacturing Management
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	Product Sales and Customer Service Management
Aspect B7: Anti-corruption			
General Disclosure		Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering	Operating with Integrity
Recommended Disclosures	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the Year and the outcomes of the cases	Operating with Integrity
	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	Operating with Integrity
Aspect B8: Community Investment			
General Disclosure		Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests	Public Welfare
Recommended Disclosures	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport)	Public Welfare
	B8.2	Resources contributed(e.g. money or time) to the focus area	Public Welfare

"GRI Standard" Content Index

Sections of the Report	Reference to GRI Standard
About this Report	GRI 101: Foundation GRI 102: General Disclosures
About Luye Pharma	/
Corporate Sustainability Management	GRI 101: Foundation GRI 102: General Disclosures
Product and Service Quality	GRI 416: Customer Health and Safety, GRI 417: Marketing and Labeling, GRI 418: Customer Privacy
Scientific Research and Innovation	/
Environment, Health and Safety	GRI 302: Energy, GRI 303: Water, GRI 305: Emissions, GRI 306: Effluents and Waste, GRI 307: Environmental Compliance, GRI 403: Occupational Health and Safety
Caring our Talents	GRI 401: Employment, GRI 405: Diversity and Equal Opportunity
Social Responsibility	GRI 308: Supplier Environmental Assessment, GRI 414: Supplier Social Assessment, GRI 205: Anti-corruption
Appendices	/

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