



# 2023

## Climate-related Disclosures Report

# About This Report

This is our first climate-related disclosures report. This report has been prepared in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, which cover the four pillars of Governance, Strategy, Risk Management, and Metrics and Targets.

## Reporting Period

This report covers the period from 1<sup>st</sup> January 2023 to 31<sup>st</sup> December 2023.

## Frequency of Reporting

Annual

## Reporting Scope

Leo Paper Group Headquarter and production plants (Heshan Astros printing plant, Leo United Paper Products plant, Heshan Leo Packaging & Printing plant, Hunan Astros printing plant, Leo Paper Products (Vietnam) plant). Unless specified, the figures in this report are for Heshan Astros printing plant, which is the primary plant for Leo Paper Group.

## Publication

April 2024

## Verification

This report has been reviewed by an independent 3rd party (Hong Kong Quality Assurance Agency, HKQAA) to provide assurance on the report contents.

# Contents

## 3 Governance

- Board’s Oversight
- Management’s Role

## 4 Strategy

- Climate Change Risks and Opportunities
- Scenario Analysis

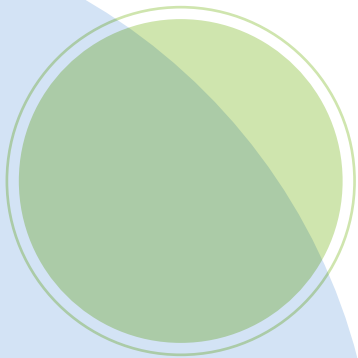
## 14 Risk Management

## 15 Metrics & Targets

## 16 TCFD Index

## 19 Verification Statement

## 20 About Leo Paper



# Introduction

With decades of dedication to sustainability and its development, Leo Paper acknowledges the challenges posed by climate change and is committed to the global efforts in working together to mitigate the climate change effects. Leo Paper supports the target of the Paris Agreement.

The report consists of four major chapters with the pillars of the TCFD recommendations, namely Governance, Strategy, Risk Management and Metrics and Targets. It outlines our approach to identifying and addressing key climate-related risks and opportunities, developing response measures, improving the management of metrics and targets, and building long-term climate resilience.

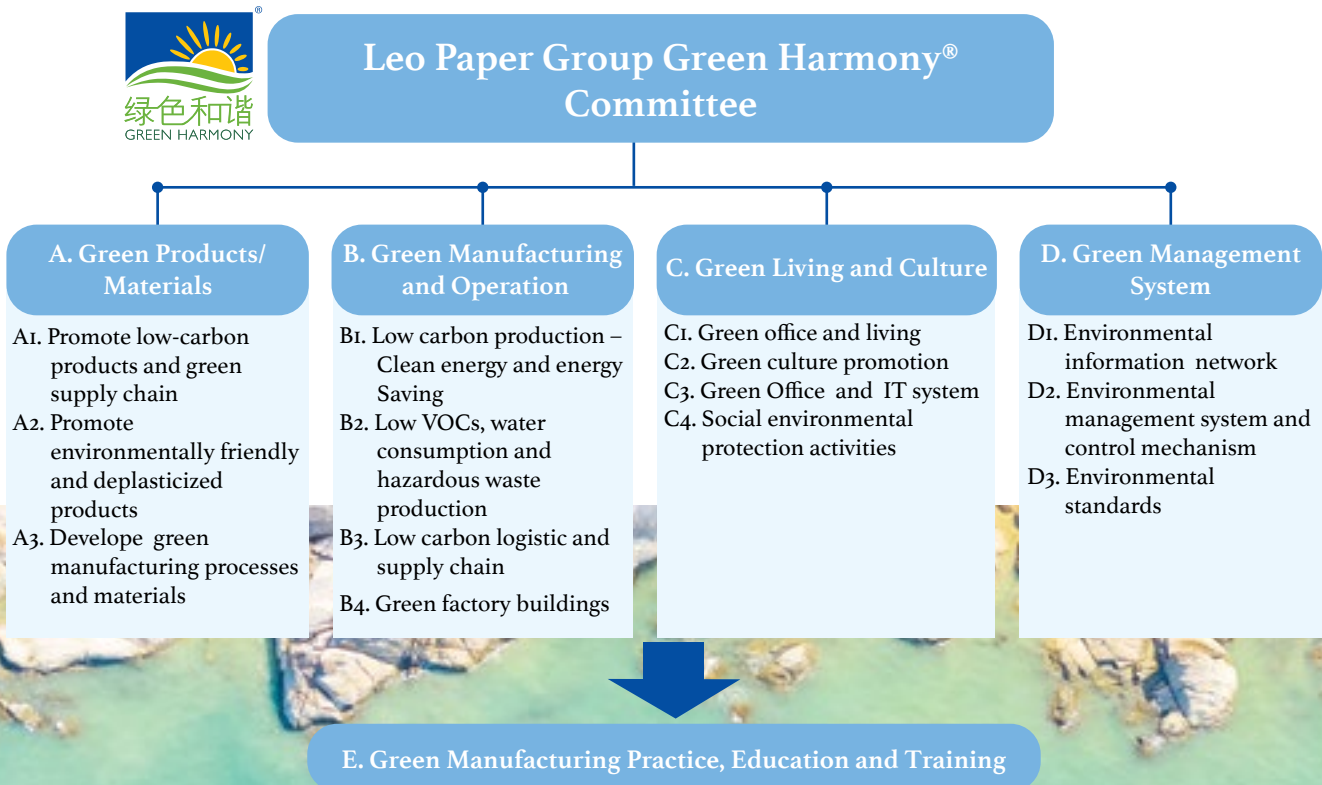


# Governance

## Board's Oversight

Leo's Board of Directors has established a Green Harmony Committee to develop and review climate-related strategies and management practices, oversee climate-related issues and coordinate and support climate-related efforts.

The Green Harmony Committee is responsible for monitoring the climate-related issues, and the corresponding working teams are responsible for providing analysis, assessment, management and supervision of relevant climate issues and taking necessary actions to deal with climate-related risks and opportunities.



## Management's Role

The Green Harmony Committee is responsible for monitoring sustainability projects and actions. The Committee hold meetings quarterly to discuss sustainability and climate-related issues.

## Strategy

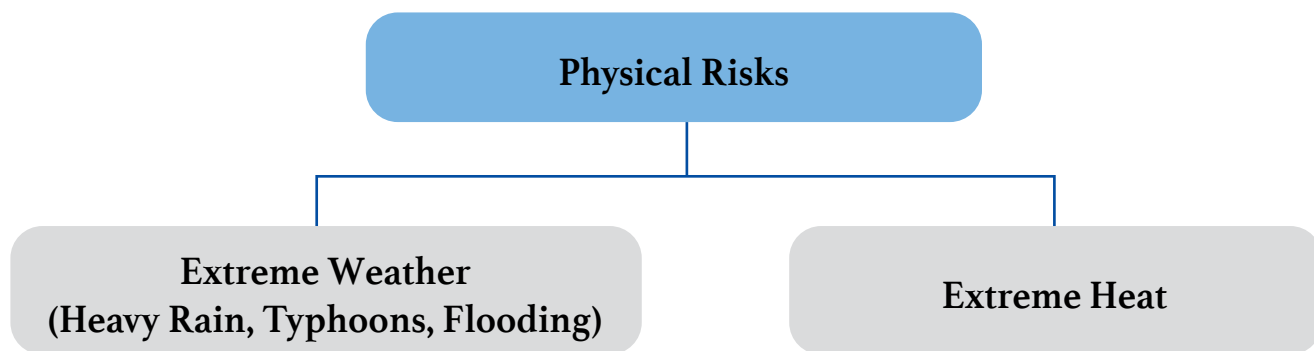
### Climate Change Risks and Opportunities

Leo has recognized the importance of addressing climate change risks and seizing climate change opportunities for low-carbon development and has included the risks posed by climate change into existing risk management mechanisms. Leo also has assessed the physical/entity and transition risks and opportunities associated with operating its business under different climate scenarios.

Through analysis and assessment of the impact of physical and transitional risks, we outline a list of major risks based on the degree of impact and likelihood of occurrence and develop corresponding response strategies.

## Physical Risks

Climate change can lead to different physical risks, including extreme weather and extreme heat. We identify such risks and develop our mitigation response.



Risk	Potential Consequences	Period*	Degree of Impact	Counter-risk Measures
Extreme Weather (Heavy Rain, Typhoons, Flooding)	<ul style="list-style-type: none"><li>• Increase the spending on extreme weather mitigation measures, such as placing sandbags for flood control.</li><li>• Increase expenditure on infrastructure, equipment, transportation and transportation equipment maintenance.</li></ul>	Medium Term	★★★	<ul style="list-style-type: none"><li>• Formulate emergency prevention and control measures for extreme weather, and simulate drills every year to ensure that protection can be provided in time and losses can be minimized in the event of extreme weather.</li></ul>

Risk	Potential Consequences	Period*	Degree of Impact	Counter-risk Measures
Extreme Weather (Heavy Rain, Typhoons, Flooding)	<ul style="list-style-type: none"> <li>• Increase economic losses from reduced capacity and disruptions to supply chain products or services.</li> <li>• Increase the cost of insurance premiums.</li> <li>• Increase employee health and safety risks.</li> </ul>	Medium Term	★★★	<ul style="list-style-type: none"> <li>• Increase resilience to extreme weather, including defense resources (e.g., sandbags and pumps), training, and more.</li> <li>• Strengthen communication and cooperation with local governments to prepare for extreme weather in advance.</li> </ul>
Extreme Heat	<ul style="list-style-type: none"> <li>• Increase the cost of energy and water consumption.</li> <li>• Increase the cost of environmental improvement on the factory site.</li> <li>• Increase employee health and safety risks.</li> <li>• Increase the economic losses caused by the decline in production capacity.</li> </ul>	Long-term	★★	<ul style="list-style-type: none"> <li>• Develop extreme heat cooling protocols to ensure the use of equipment and the health and safety of employees.</li> <li>• Strengthen the maintenance of refrigeration equipment and improve the cooling efficiency of cooling towers.</li> </ul>

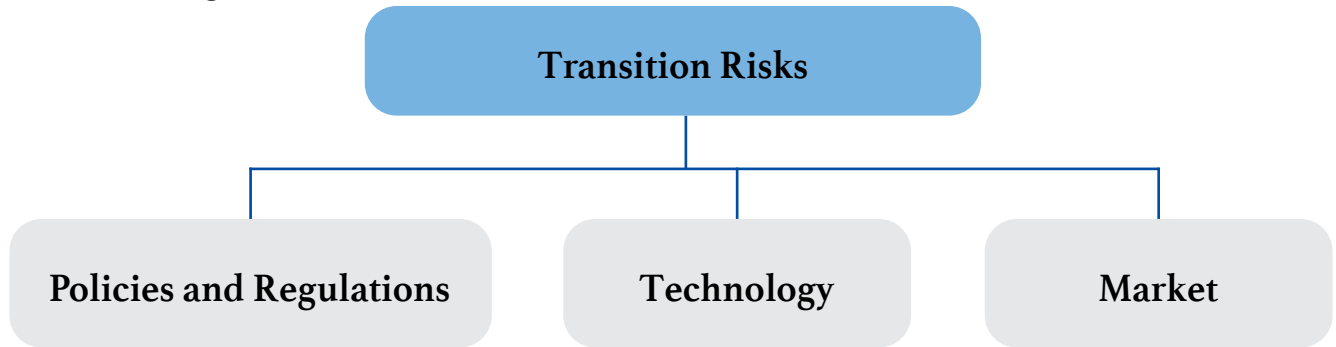
\* Short Term(0-3 years), Medium Term(3-10 years) and Long-term(over 10 years).





# Transition Risks

Transition risk scenarios are identified, which facilitate the development of decarbonization plans, including policy and regulatory changes, technology, and market changes.



Risk	Potential Consequences	Period*	Degree of Impact	Counter-risk Measures
Policies and Regulations	<ul style="list-style-type: none"> <li>• Carbon taxes or carbon trading schemes leads to increased operating costs.</li> </ul>	Medium Term	★★★	<ul style="list-style-type: none"> <li>• Regularly collect and understand the latest carbon tax rates and carbon trading market information, and continue to carry out carbon emission reduction and carbon neutrality to reduce operating costs.</li> </ul>
	<ul style="list-style-type: none"> <li>• Increased reporting obligations for greenhouse gas emissions and environmental violations leads to increased compliance costs.</li> </ul>	Short Term	★★★	<ul style="list-style-type: none"> <li>• Continuously collect and understand the latest laws and policies, and update internal management systems in a timely manner to ensure compliance with disclosure and compliance requirements.</li> </ul>

Risk	Potential Consequences	Period*	Degree of Impact	Counter-risk Measures
Technology	<ul style="list-style-type: none"> <li>• Increase capital investment in new technologies for energy conservation and carbon reduction.</li> </ul>	Long-term	★★	<ul style="list-style-type: none"> <li>• Adopt efficient and low-carbon production equipment, technology and process to improve the effective use of energy and resources.</li> </ul>
	<ul style="list-style-type: none"> <li>• Increase R&amp;D expenses to explore environmental protection solutions.</li> </ul>	Long-term	★★	<ul style="list-style-type: none"> <li>• Support independent research and development and innovation of green and low-carbon solutions.</li> </ul>
Market	<ul style="list-style-type: none"> <li>• Higher fuel and energy costs led to higher raw material procurement and operating cost</li> </ul>	Long-term	★★★	<ul style="list-style-type: none"> <li>• Promote the use of renewable or low-emission energy sources to reduce the risk of future fuel and energy price fluctuations</li> </ul>
	<ul style="list-style-type: none"> <li>• Changes in consumer preferences affect the competitiveness and share of product markets.</li> </ul>	Medium Term	★★	<ul style="list-style-type: none"> <li>• Maintain close communication with stakeholders to keep abreast of their needs and expectations.</li> <li>• Accelerate the research and development of green and low-carbon solutions, enhance market competitiveness, and meet the needs and expectations of stakeholders.</li> </ul>

\* Short Term(0-3 years), Medium Term(3-10 years) and Long-term(over 10 years).

# Opportunities

Decarbonization and transition to low-carbon economy present us opportunities to further optimize and enhance our operations.

## (i) Transitioning to Low-carbon Economy



### Low-carbon Office

Through green IT technology and management, we have implemented low-carbon office programs at both our headquarter and Heshan Astros production plant to reduce energy consumption and consequently carbon emissions as well as reducing consumption of office utilities.



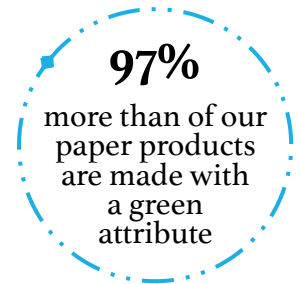
### Green Products

Leo has been searching for, exploring and developing new green materials and products to meet the consumer demands and needs. Our designated R&D team is responsible for developing green materials and products. We are committed to promoting the use of environmentally conscious materials.

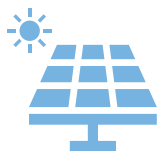


### Collaboration and Partnership

Leo will further work with customers, suppliers, governmental organizations and other interested organizations for transitioning to low-carbon economy.



## (2) Decarbonization of Our Operations



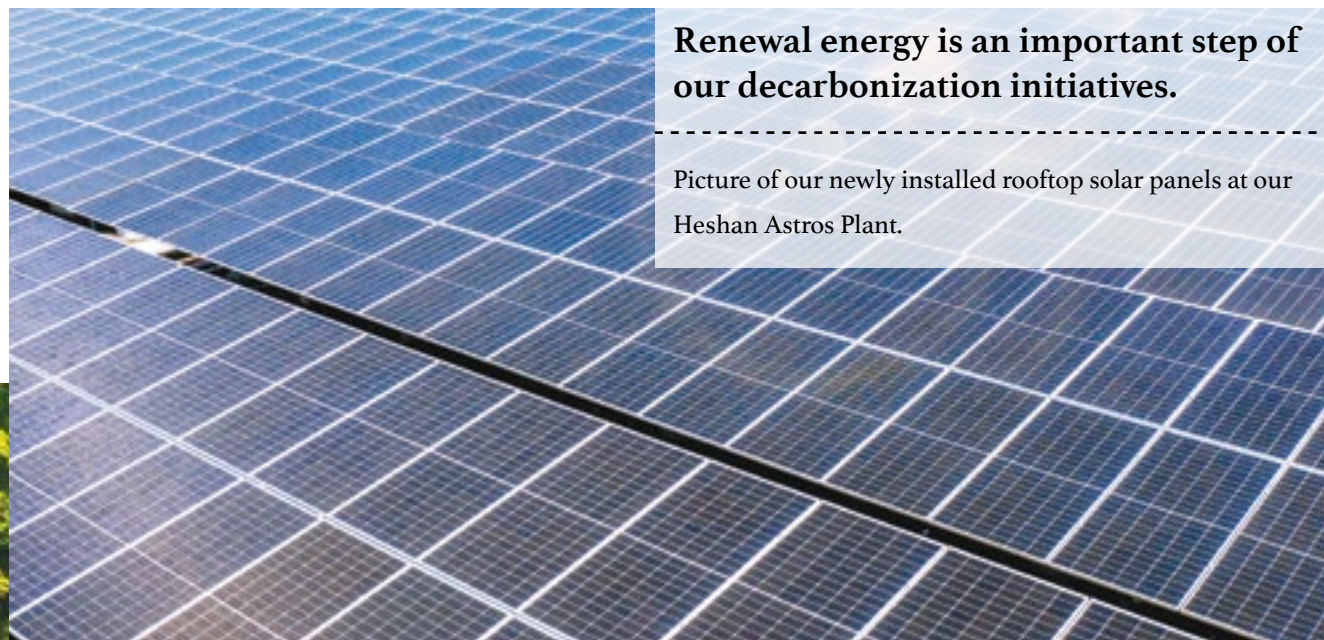
### Renewal Energy

Renewal energy is an important step in our carbon reduction efforts. In 2023 we installed solar panel at Heshan Astros Plant. The solar panels installed at our plant are expected to generate millions of kilowatt-hours of clean electricity each year when operating at full-scale.



### Energy-saving Technological Transformation

We explore opportunities to reduce energy consumption and GHG emissions in our operations in continues bases. In the past 2 years, we have implemented a number of energy-saving and carbon-reduction technology projects including intelligent joint control system of air compressor and waste heat recovery system.



**Renewal energy is an important step of our decarbonization initiatives.**

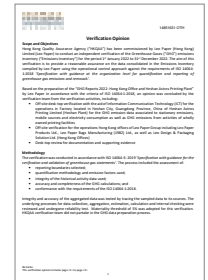
Picture of our newly installed rooftop solar panels at our Heshan Astros Plant.

# Decarbonization Action Plan

To reach the ambitious goal of carbon neutrality by 2050, we have developed Leo's climate change action plan and its path to carbon neutrality. We must mitigate the operational impacts of climate change.

## (1) Enhancing the Carbon Emission Mechanism

- ① Promoting the optimization of the carbon inventory mechanism of enterprises, such as enhancement of ISO 14064 greenhouse gas quantification and reporting management system.
- ② Promoting the improvement of the product carbon footprint accounting mechanism, such as the introduction of the ISO 14067 product carbon footprint certification system.



## (2) Promoting the Application of Energy-saving and Efficiency-enhancing Technologies

- ① Energy conservation and emission reduction: energy-saving technological transformation and elimination of high-energy-consuming equipment.
- ② Improving quality and efficiency: improve equipment production efficiency, resource/energy recovery.



### (3) Optimizing the Energy Structure

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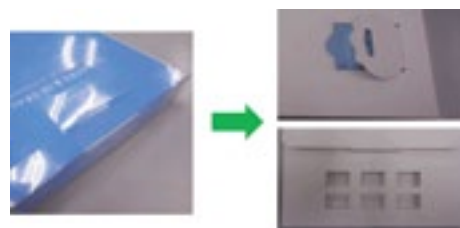
- ① Replacing traditional oil/coal energy with new energy sources.
  - ② Developing and utilizing clean energy.
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### (4) Promoting Green Operations

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- ① Promoting low-carbon logistics and transportation.
  - ② Promoting the construction of green supply chain and achieve green procurement.
  - ③ Promoting green product design.
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## Scenario Analysis

To effectively identify and combat the potential impact of climate-related risks on our business performance, we have been identifying the climate change scenarios in our risk assessment process and will further analyze and reduce our climate-related risks.

Based on the recommendations of the Task Force on Climate-related Financial risks, we selected two scenarios (SDS and RCP 8.5) to simulate the potential changes in case of major climate hazards. The scenarios, (2030 and 2050) mainly focus on operations of Heshan Astros plant.

Indicator	Low-emission Scenarios	High Emission Scenarios
Reference Model	IEA's Sustainable Development Scenario (SDS)	The Intergovernmental Panel on Climate Change ("IPCC") represents Concentration Pathway (RCP) 8.5
Illustrate	Choosing SDS to assess the impact of transition risks as we move towards a low-carbon economy helps assess our plan of contribution to achieve our commitment to zero emissions.	RCP 8.5 was chosen to assess the impact of physical risks under a high emission scenario, helping to measure our resilience to the severe consequences of climate change.
Hypothesis	Achieve emissions reduction with effective management systems and more energy and carbon reduction, and fully meet all current net-zero commitments. By 2100, the global average temperature will not rise by more than 2 degrees Celsius.	By 2100, the global average temperature will rise by about 4 degrees Celsius, and the frequency and intensity of extreme weather events will be high.

# Risk Management

Leo Paper is aware that climate-related risks can have a potential impact on our assets, operations, and supply chain. We have established a comprehensive risk management system and have implemented policies and procedures to mitigate the risks. We integrate climate change into our sustainability development strategy.

Climate-related risks are identified and assessed, with development of control and response measures. The Green Harmony Committee oversees the climate risk management system, where correspondent working teams report to the committee with the evaluation and implementation of climate risk management. The Board is responsible for making decisions about the risks that will be accepted or transferred so we can achieve effective risk management.

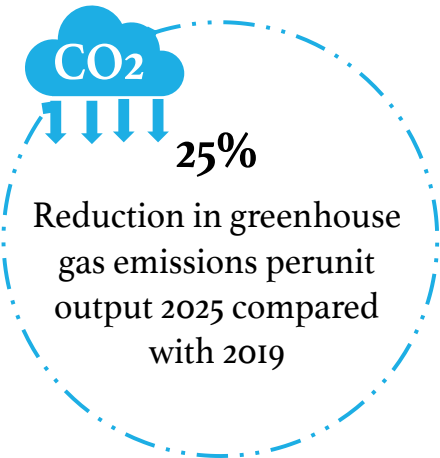
We internally audit and verify that management strategies of climate-related risks are effectively implemented. This method is integrated into our overall risk management program.



# Metrics and Targets

Leo has developed metrics and targets in line with the Paris Agreement pathway. We also support the United Nations Sustainable Development Goals implementation.

We have set up metrics and targets to assess climate-related risks and opportunities in line with our strategy and risk management process. Our climate-related goal is to achieve net-zero emissions by 2050.



Here below the carbon emissions of our Heshan Astros Production Plant:

Indicator	2023
Direct (Scope 1) Carbon Dioxide Equivalent (CO2e) Emissions (Tons):	3,740
Indirect (Scope 2) Carbon Dioxide Equivalent (CO2e) Emissions (Tons):	52,090
Indirect Carbon Dioxide Equivalent (CO2e) Emissions (Air Travel) (Tons):	22
Total	55,852

In 2023, our production plant of Heshan Astros achieved significant carbon reduction through installation of solar panel, purchasing Green Power (I-REC), and recycling of waste paper, resulting in a total reduction of 15,500 tons of carbon emissions.

# TCFD Index

TCFD Recommendations	Cross-reference/Comments	External Assurance
<p><b>Governance</b> Disclose the organization’s governance around climate-related risks and opportunities.</p>		
<p>a) Describe the board’s oversight of climate-related risks and opportunities.</p>	<ul style="list-style-type: none"> <li>•Governance</li> </ul>	<p>√</p>
<p>b) Describe management’s role in assessing and managing climate-related risks and opportunities.</p>	<ul style="list-style-type: none"> <li>•Governance</li> </ul>	<p>√</p>
<p><b>Strategy</b> Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material</p>		
<p>a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</p>	<ul style="list-style-type: none"> <li>•Climate Change Risks and Opportunities</li> </ul>	<p>√</p>
<p>b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.</p>	<ul style="list-style-type: none"> <li>•Climate Change Risks and Opportunities</li> </ul>	<p>√</p>

TCFD Recommendations	Cross-reference/Comments	External Assurance
<p><b>Strategy</b>            Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</p>		
<p>c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</p>	<ul style="list-style-type: none"> <li>• Climate Change Risks and Opportunities</li> <li>• Scenario Analysis</li> </ul>	<p style="text-align: center;">√</p>
<p><b>Risk Management</b>            Disclose how the organization identifies, assesses, and manages climate-related risks.</p>		
<p>a) Describe the organization's processes for identifying and assessing climate-related risks.</p>	<ul style="list-style-type: none"> <li>• Climate Change Risks and Opportunities</li> </ul>	<p style="text-align: center;">√</p>
<p>b) Describe the organization's processes for managing climate-related risks.</p>	<ul style="list-style-type: none"> <li>• Climate Change Risks and Opportunities</li> <li>• We regularly review potential risks and the Group's business and sustainability risk management.</li> </ul>	<p style="text-align: center;">√</p>

TCFD Recommendations	Cross-reference/Comments	External Assurance
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	<ul style="list-style-type: none"> <li>• Climate Change Risks and Opportunities</li> <li>• Climate-related risks are taken into account throughout the company-wide risk identification, assessment and management process.</li> </ul>	√
<p><b>Metrics and Targets</b>  Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</p>		
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	<ul style="list-style-type: none"> <li>• Climate Change Risks and Opportunities</li> <li>• Risk Management</li> <li>• Metrics and Targets</li> <li>• 40.98% reduction of energy consumption per production unit in 2022 compared with that of the base year.</li> </ul>	√
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas emissions, and the related risks.	<ul style="list-style-type: none"> <li>• Metrics and Targets</li> </ul>	√
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	<ul style="list-style-type: none"> <li>• Metrics and Targets</li> <li>• 40.98% reduction of energy consumption per production unit in 2022 compared with that of the base year</li> </ul>	√

## VERIFICATION STATEMENT

### Scope and Objective of Verification

Hong Kong Quality Assurance Agency (HKQAA) has been engaged by the Leo Paper Group (Leo Paper) to undertake an independent verification of its 'Leo Paper's 2023 Climate-related Disclosure report' ("Report") to be published by Leo Paper in March 2024.

The aim of this verification is to provide reasonable assurance of the reliability of the contents of the Report. The Report has been prepared with reference to 'Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures (October 2021)' and 'Guidance on Metrics, Targets, and Transition Plans (October 2021)'.

### Level of Assurance and Methodology

The process applied in this verification was based on the International Standard on Assurance Engagements 3000 (Revised) – 'Assurance Engagements Other Than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board. Our evidence-gathering process was designed to obtain a reasonable level of assurance as set out in the standard for the purpose of devising the verification conclusion and the extent of this verification process undertaken was provided for the Core Elements of Task Force on Climate-Related Financial Disclosures.

HKQAA's verification procedure covered verifying the framework for disclosures, mechanisms for collecting and analyzing relevant information, and internal controls of reporting and reviewing of supporting evidence pertaining to the Report. In addition, interviewing responsible personnel with accountability for preparing the disclosed contents and verifying the selected representative sample of data and information were covered. Raw data and supporting evidence of the selected samples were also examined during the verification process.

### Independence

Leo Paper was responsible for the collection and presentation of the information presented. HKQAA did not involve establishing the disclosure framework, analysis of scenarios and risks, formulation of action plans and measurements as well as compiling or in developing the Report. Our verification activities were independent from LEO Paper. There was no relationship between HKQAA and Leo Paper that would affect the independence of HKQAA for providing the verification service.

### Conclusion

Based on the verification results and in accordance with the verification procedures undertaken, HKQAA has obtained reasonable assurance and is in the opinion that:

- The Report has been prepared with reference to the recommendations of TCFD;
- The Report illustrates the Governance, Strategy, Risk management and Metrics and Targets of Leo Paper to address climate risks in a structured, clear and consistent manner; and
- The data and information disclosed in the Report are reliable and complete.

Nothing has come to HKQAA's attention that the selected disclosed contents contained in the Report have not been prepared and presented fairly and honestly, in material aspects, in accordance with the verification criteria.

Signed on behalf of Hong Kong Quality Assurance Agency



**K T Ting**  
Chief Operating Officer  
25 March 2024

# About Leo Paper

Leo Paper is a leading global printing communications company providing comprehensive solutions starting from pre-press to printing and post-press production. Headquartered in Hong Kong, with production plants in mainland China and Vietnam, and sales offices around the world, Leo Paper provides comprehensive solutions to global customers.

Addressing Climate issues is an integral part of Leo's sustainability initiatives. Leo Paper is committed to take actions that are in line with global climate initiatives and tackle climate change.





# 2023

## Climate-related Disclosures Report



ISO 14064-1: 2018

LEO PAPER GROUP (HONG KONG) LIMITED's Greenhouse Gas Assertion for the period 1 Jan 2022 to 31 Dec 2022 has been verified by Hong Kong Quality Assurance Agency in accordance with ISO 14064-1:2018 in meeting the requirements of ISO 14064-1:2018. (Report Reference NO.: 14B1831-0116)



ISO 9001 - ISO 14001  
ISO 45001 - ISO/IEC 27001



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