



## Environmental: To Tackle Climate Change and Restore Nature

### HIGHLIGHTS

**5.68 GWh**

green electricity being  
utilised



Solid waste reduction by

**70%**



Municipal **water**

**reduction** by **22%**

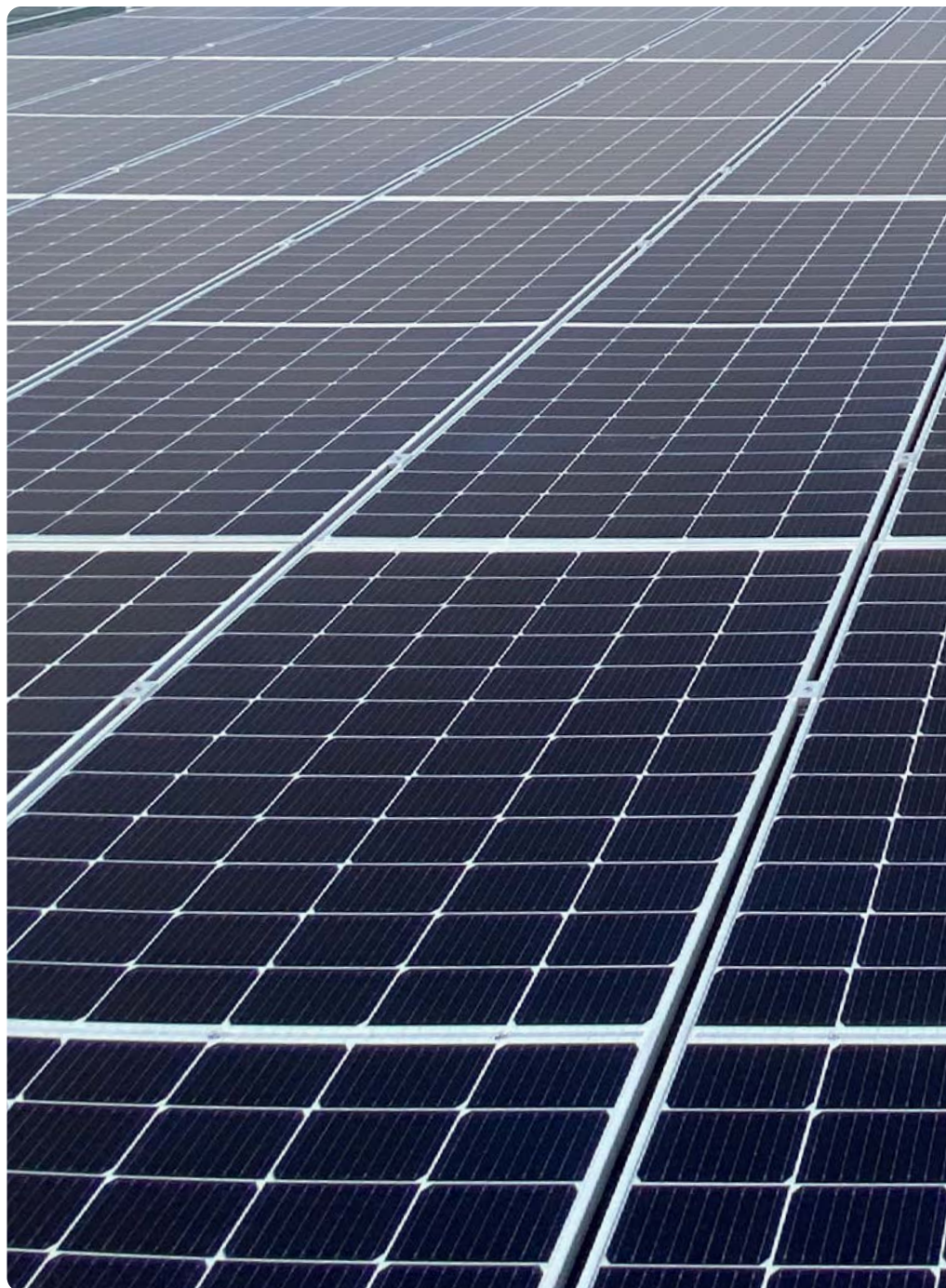


Planted

**2,150**

**mangrove trees**

to support biodiversity  
conservation



### GOAL 1: TRANSITIONING INTO A NET ZERO CARBON BUSINESS





## Environmental



### PHYSICAL IMPACTS OF CLIMATE CHANGE

**Management Approach:**

*We are mindful of the economic, environmental and social issues that may arise due to physical impacts of climate change. Accordingly, we strictly manage our emissions from business operations and are prudent with resource consumption.*

Top Glove acknowledges the growing significance of climate-related risks and opportunities in relation to our business and the environment. We are committed to reducing the adverse environmental effects of our operations and supply chain while capitalising on the potential benefits.



## Environmental

### CLIMATE RISK GOVERNANCE

On Sustainability governance, the Board is supported by the Board Sustainability Committee (“BSC”) which was established in March 2019 to strategically integrate sustainability across key aspects of Top Glove’s business. The BSC comprises of four independent directors and is chaired by Ms. Sharmila Sekarajasekaran, Senior Independent Director. The BSC supervises Top Glove’s sustainability risk and strategy, including climate-related risk and opportunities, and initiatives for climate mitigation and adaptation. The BSC also oversees the establishment of targets and monitors progress towards these targets. Regular updates on climate-related risks as well as opportunities are provided through structured reporting by the BSC during our quarterly Board meetings. These updates cover emerging climate trends, regulatory changes, and strategic adjustments. The Board assesses the necessary skills for climate-oriented strategies through evaluating current skills, predicting future needs, capacity building, consulting industry associations, and aligning leadership.

The BSC is supported by the Sustainability Steering Group (“SSG”) which is led by our Managing Director and consists of members of all Head of Departments across the Company. Collaborative efforts are undertaken with group departments to ensure climate-related factors are integrated seamlessly into their operations. Through bimonthly meetings, the SSG brainstorms on climate risk matters, executes mitigation and strategies. Top Glove employs a systematic framework to identify, assess, and mitigate sustainability risk including climate-related risks. This entails regular risk assessments that evaluate potential risks across operational, financial, and reputational aspects. Moreover, controls are established to monitor and manage GHG emissions, energy consumption, and resource utilisation. Guided by established principles, management takes on climate-related risks through a combination of methods, including the implementation of Enterprise Risk Management (“ERM”), Task Force on Climate-related Financial Disclosures (“TCFD”), International Financial Reporting Standards (“IFRSs”) S2, and emerging regulations.

#### Climate Risk Strategy

We conducted a comprehensive assessment of the climate-related risks and opportunities that could reasonably impact our Company’s prospects. As part of this evaluation, we employed scenario analysis to envision potential climate scenarios and their potential effects on our operations. We have categorised the identified climate-related risks into two main types: physical risks and transition risks. Following the guidelines of the TCFD and the Intergovernmental Panel on Climate Change (“IPCC”), we undertook a comprehensive climate change scenario assessment in FY2023.

This assessment, conducted using both quantitative and qualitative methods, aimed to identify, evaluate, and manage climate-related risks and opportunities for Top Glove. Our scenarios are based on the Representative Concentration Pathways (“RCPs”) outlined by the IPCC, specifically aligning with the RCP2.6 and RCP8.5 pathways. Climate-related risks and opportunities assessment are focused on two different and intentionally extreme scenarios over short, medium and long-time horizons to provide contrast between potential futures. The established methodology in ERM Framework is also integrated when evaluating the climate scenario analysis to ensure effective and comprehensive climate-related risk management approach.

#### Risk Management

The Group’s ERM Framework is set up in accordance with ISO 31000:2018 Risk Management Guideline where risks arising from the business and manufacturing operations are continuously identified. A systematic risk management is conducted through qualitative and quantitative analysis to identify the risk possibility and the impact severity as enclosed in the ERM Framework. Transition and physical climate risk are one of the risk assessment areas integrated in the Group’s ERM Framework. Risk Management regularly coordinates with risk owners from all business units across operating countries to identify, assess, and mitigate climate-related risks, following the methodology outlined in the ERM Framework.

## Environmental

The Group is committed to promote risk management culture across the Company where such initiatives have been conducted throughout FY2023:



Risk management training has been conducted by our in-house Risk Management department with 98% passing rate in post-test indicating training effectiveness. Additionally, newsletters focused on risk issues and risk awareness have been circulated to enhance employee awareness and promote vigilance. The newsletter are intended to communicate important risk-related information, share best practices and provide insights on emerging risks and their potential impact on our organisation. By keeping employees informed and engaged, we aim to foster a risk-awareness culture and empower everyone to contribute to the identification, assessment and mitigation of risk.



Manufacturing risk owners from each factory are consistently engaged in the review and highlighting in any arising operation risks on a weekly and monthly basis. Monthly Group Departmental and Managerial meetings provide a valuable arena for operational and business owners to collaboratively address these risks, benefiting from input and insights from senior management. Meanwhile, the Monday sharing sessions are conducted on a weekly basis where leaders can share their knowledge and insights on a wide range of topics including risk culture. These sessions aim to enlighten and inspire employees, fostering a culture of continuous learning and personal development. Emerging business-related risks such as sales and pricing matters are deliberated on a weekly basis.

### Climate-related Risk and Opportunities

#### Climate-related Risk: Physical Risk

Climate scenario aligning with RCP8.5 Limited climate action leading to global warming of 4 degrees Celsius above pre-industrial levels by 2100

Risk Type	Financial Impacts	Time horizons	Strategies			
<p><b>Acute and chronic</b></p> <p>High temperatures leading to frequent drought. This drought has resulted in an <b>emerging risk</b> of increased water scarcity.</p> <table><tr><td><b>Likelihood</b></td><td>Likely</td></tr><tr><td><b>Magnitude</b></td><td><b>Low</b></td></tr></table>	<b>Likelihood</b>	Likely	<b>Magnitude</b>	<b>Low</b>	<ul style="list-style-type: none"><li>• Reduced revenue from disruption to production output (e.g. transport difficulties, supply chain interruption, low sales)</li><li>• Increased operating costs (e.g. negative impact on workforce such as absenteeism, safety and health)</li><li>• Increased operating cost (increase cost for industrial water use and potential conflicts over limited water usage)</li></ul>	<p>Long-term</p> <ul style="list-style-type: none"><li>• Ensuring monthly maintenance on the in-house Water Treatment Plant for continuous supply.</li><li>• Establishment of 2 proprietary water treatment plants, strategically providing reverse osmosis water to manufacturing facilities located in Klang. This achievement was realised at a cost of RM89.8k. <b>(more details see page 29)</b></li><li>• Sustaining rainwater harvesting projects within manufacturing facilities.</li><li>• Sustaining Integrated Industrial Effluent Treatment System (IETS) to increase water recycling efforts within Top Glove’s production operations.</li></ul>
<b>Likelihood</b>	Likely					
<b>Magnitude</b>	<b>Low</b>					





## Environmental

### Climate-related Risk: Physical Risk (continued)

Climate scenario aligning with RCP8.5 Limited climate action leading to global warming of 4 degrees Celsius above preindustrial levels by 2100

Risk Type	Financial Impacts	Time horizons	Strategies			
<p><b>Acute and chronic</b></p> <p>High temperatures cause heavy and prolonged rain which causes severe area flooding in the area where the manufacturing facility is located.</p> <table><tr><td>Likelihood</td><td>Likely</td></tr><tr><td>Magnitude</td><td>Medium</td></tr></table>	Likelihood	Likely	Magnitude	Medium	<ul style="list-style-type: none"><li>Reduced revenue from disruption in operation plant that is located at flood risk area. (e.g. transport difficulties, supply chain interruption, low output lead to low sales) <i>Estimated quantitative financial impact:</i> <i>RM96k per incident per factory</i></li><li>Increased operating cost (e.g. damages to facilities, negatives impact on workforce)</li><li>Elevated insurance premium (e.g. assets located in ‘high risk’ locations)</li></ul>	<p>Short-term to Long-term</p> <ul style="list-style-type: none"><li>Implemented a variety of flood mitigation initiatives aimed at improving drainage and water flow systems in the vicinity of our Klang factories and neighbouring residential areas. <i>Total investment cost in FY2023: RM22k</i></li></ul>
Likelihood	Likely					
Magnitude	Medium					

### Climate-related Risk: Transition Risk

Climate scenario aligning with RCP2.6 Aligns with the goals of the Paris Agreement and requires steep global annual emissions reductions, sustained for decades, to stay within a 1.5 degrees Celsius carbon budget

Risk Type	Financial Impacts	Time horizons	Strategies				
<b>Policy and Legal</b> <ul style="list-style-type: none"><li>Enhanced emission reporting obligations</li><li>Mandates on and regulation of existing products and services e.g. EUDR</li><li>Emerging regulations on carbon-pricing mechanism e.g. Carbon Border Adjustment Mechanism (CBAM)</li></ul> <table><tr><td>Likelihood</td><td>Likely</td></tr><tr><td>Magnitude</td><td>Medium</td></tr></table>	Likelihood	Likely	Magnitude	Medium	<ul style="list-style-type: none"><li>Increased operating costs (e.g. heightened compliance costs, elevated insurance premiums)</li><li>Incurring losses, impairment of assets, and premature retirement of current assets due to policy shifts</li><li>Increased costs resulting from fines/sanction</li><li>Reduced revenue due to diminished product and demand due to shifting market perceptions</li><li>Elevated expenses due to the implementation of carbon taxes by the exporting nation</li></ul>	Short-term	<ul style="list-style-type: none"><li>Performed regular monthly assessments to ensure compliance with Scheduled Waste and Industrial Effluent Treatment System (IETS) regulation</li><li>Engaged proactively in workshops, training programmes, webinars, and skill-building activities facilitated by environmental entities such as the Environment Institute of Malaysia (EIMAS) and Climate Change Governance (CCG), among others</li></ul>
Likelihood	Likely						
Magnitude	Medium						

## Environmental

### Climate-related Risk: Transition Risk (continued)

Climate scenario aligning with RCP2.6 Aligns with the goals of the Paris Agreement and requires steep global annual emissions reductions, sustained for decades, to stay within a 1.5 degrees Celsius carbon budget

Risk Type	Financial Impacts	Time horizons	Strategies
		Medium-term	<ul style="list-style-type: none"> <li>Attaining relevant sustainability ISO certifications such 14001 and 50001 for manufacturing plant to ensure alignment with the Environmental and Energy Management System</li> <li>Instituting a centralized storage system for scheduled waste, enhancing oversight to ensure compliance</li> <li>A dedicated Traceability Task Force at Top Glove is actively developing an in-house supply chain traceability system to align with EUDR</li> </ul>
		Long-term	<ul style="list-style-type: none"> <li>Published medium decarbonization strategy for scope 1 &amp; 2 emissions</li> <li>Transition into renewable electricity through solar <b>(more details see page 27)</b> <i>Investment involved: Power Purchase Agreement with Shizen Malaysia Sdn Bhd for 20 years</i></li> </ul>
<b>Technology</b> <ul style="list-style-type: none"> <li>Substitution of existing products with lower emissions options</li> <li>Unsuccessful investment in new technologies</li> </ul>	<ul style="list-style-type: none"> <li>Incurred losses, impairment of assets, and premature retirement of current assets due to policy shifts</li> <li>Increased costs resulting from capital investments in technology development and R&amp;D expenditures</li> </ul>	Medium-term to Long-term	<ul style="list-style-type: none"> <li>Establishment of Top Glove's Digitalisation and Automation team, entrusted with driving initiatives aligned with the Industry 4.0 Framework as a strategic response</li> <li>Exploring projects focused on minimising carbon emissions, including projects like the Combined Heat and Power (CHP) system</li> </ul>
<b>Market</b> <ul style="list-style-type: none"> <li>Customer Preferences Change: Risk of customers preferring eco-friendly products, affecting demand</li> <li>Market Signal Uncertainty: Risk from unclear trends, making strategy adjustments difficult</li> </ul>	<ul style="list-style-type: none"> <li>Lowered product demand due to changing consumer preferences</li> <li>Changed in revenue composition, resulting in decreased revenues</li> <li>Abrupted and unexpected shifts in energy costs</li> <li>Financial adjustment due to assets adjustment (e.g. fossil fuel reserves, land valuations, and securities)</li> </ul>	Medium-term to Long-term	<ul style="list-style-type: none"> <li>Manufacturing biodegradable gloves as an environmentally friendly alternative</li> <li>Process of developing Top Glove's own nitrile plan to secure our own raw material</li> <li>Leveraging our FSC-certified printing subsidiary, Eastern Press, to enhance sustainability in the packaging of inners and cartons <b>(more details see page 36)</b></li> </ul>

## Environmental

### Climate-related Risk: Transition Risk (continued)

Climate scenario aligning with RCP2.6 Aligns with the goals of the Paris Agreement and requires steep global annual emissions reductions, sustained for decades, to stay within a 1.5 degrees Celsius carbon budget

Risk Type	Financial Impacts	Time horizons	Strategies
<b>Reputation</b> <ul style="list-style-type: none"> <li>Increased stakeholders concern or negative stakeholder feedback</li> </ul>	<ul style="list-style-type: none"> <li>Reduced revenue from decreased demand for products (e.g. negative reputation due to poor climate practices)</li> <li>Reduced revenue from negative workforce impacts (e.g. A tarnished reputation can affect employee attraction and retention, leading to workforce challenges and potential disruptions)</li> </ul>	Short-term to Medium-term	<ul style="list-style-type: none"> <li>Consistently keep internal stakeholders informed about initiatives driven by the Top Glove SSG, led by the Managing Director and composed of all Department Heads. The group convenes bi-monthly to ensure the progress of ESG targets</li> <li>Align product development and innovation with sustainability trends and customer preference</li> </ul>

Short-term: 0 to 3 years,  
Medium-term: 3 to 5 years  
Long-term: >5 years

### Climate-related Opportunities (Physical & Transition Risks)

Opportunity Type	Financial Impacts	Time horizons	Strategies
<b>Resource Efficiency</b>	<ul style="list-style-type: none"> <li>Reduced operating costs (e.g. through efficiency gains and cost reductions)</li> <li>Increased revenues due to lower operating cost</li> <li>Increased value of fixed assets (e.g. highly rated energy-efficient buildings)</li> <li>Benefits to workforce management and planning (e.g. improved health and safety, employee satisfaction) resulting in lower costs</li> </ul> <p>Total cost savings in FY2023: RM1.5 million Total revenue in FY2023: RM170k</p>	Short-term	<ul style="list-style-type: none"> <li>Evaluate business travel practices to optimise transportation efficiency</li> <li>Initiate recycling programmes, like Fabric Recycling, where materials are upcycled and repurposed to create cleaning cloths and bags, aligning with the circular economy principles</li> </ul>
		Medium-term	<ul style="list-style-type: none"> <li>Enhanced water supply stability through various sustainable surface water extraction projects <b>(more details see page 29)</b></li> <li>Increased water efficiency at manufacturing facilities and reduced water resources intake through recycling <b>(more details see page 29)</b></li> <li>Upcycling the waste to reusable material as to reduce landfill disposal and include other projects such as former reglazing projects, rubber reclaim <b>(more details see page 32)</b></li> </ul>

## Environmental

### Climate-related Opportunities (Physical & Transition Risks) (continued)

Opportunity Type	Financial Impacts	Time horizons	Strategies
		Short-term	<ul style="list-style-type: none"> <li>Building with higher resources and energy efficiency. Top Glove Head Office in Malaysia obtained Green Building Index</li> </ul>
<b>Energy Source</b>	<ul style="list-style-type: none"> <li>Reduced electricity cost through low emission energy sources such as solar power</li> </ul> <p><i>Total cost savings in FY2023: RM3.43 million worth of electricity saved</i></p>	Long-term	<ul style="list-style-type: none"> <li>Transition of electricity used in manufacturing facilities to renewable energy <b>(more details see page 27)</b></li> </ul>
<b>Products</b>	<ul style="list-style-type: none"> <li>Boosted revenue by meeting growing demand for eco-friendly and low-emission products</li> <li>Elevated revenue by diversifying business through the creation of new products through R&amp;D and innovation</li> <li>Enhanced competitive positioning to align with evolving consumer preferences and resulting in increased earnings</li> </ul>	Medium-term	<ul style="list-style-type: none"> <li>Ongoing innovation in R&amp;D for biodegradable and eco-friendly glove products has been ongoing since 2019</li> <li>The R&amp;D Department, comprising 161 members is focused on innovating and creating low carbon products</li> </ul>
<b>Markets</b>	<ul style="list-style-type: none"> <li>Increased revenues through access to new and emerging markets</li> </ul>		

Short-term: 0 to 3 years,  
 Medium-term: 3 to 5 years  
 Long-term: >5 years

### Climate-related Metrics and Targets

Top Glove has employed a diverse range of metrics to assess both existing and prospective impacts. The essential performance indicators, used to gauge the advancement of strategy implementation, are complemented by metrics aimed at tracking significant risks. These indicators are informed by our TCFD risk assessment, contributing to the establishment of metrics and targets aligned with the Top Glove's Sustainability Blueprint.

Please refer to the specified section of this report, which pertains specifically to our **GHG Emissions, Energy Consumption, Water Resource Management, Waste & Effluent Management, and Sustainable Product Management**. Metrics and targets in each of this section correspond to each of the mitigation strategies outlined in our TCFD.

At Top Glove, ESG metrics linked to 40% of the Management's KPI, highlighting our commitment to sustainability. One of the five key performance areas is carbon reduction intensity, a vital part of our climate risk mitigation strategy, ensuring our leaders actively contribute to environmental goal.





## Environmental

### GHG EMISSIONS

#### Management Approach:

As a critical component of our production operations, our objective is to minimise carbon emissions as part of our contribution to addressing climate change.

Our carbon emission calculation for this year is within the operational boundary now encompasses all glove factories in Malaysia, Thailand, and Vietnam. The emission factors used for the calculation are sourced from recognised organisations like the Intergovernmental Panel on Climate Change (IPCC) and other relevant sources that pertain to our operations. As part of our commitment to environmental sustainability, we have set a clear and ambitious goal to significantly reduce our GHG emissions.

#### Improvement of GHG Inventory

We have made improvements to our GHG inventory, specifically in the following areas:

Scope 2: We have updated this scope with the latest emission factors for transparency. This ensures that our reporting accurately reflects our emissions related to purchased electricity.

Scope 3: We have enhanced our Scope 3 reporting by addition of our downstream leased assets, in addition to the existing three categories.

Below are the emission data for FY2023;

Financial Year		CO <sub>2</sub> eq Emission (tonne)		
		2021	2022	2023
Scope 1	Natural Gas	770,049	583,896	268,076
	Diesel & Petrol	N/A	3,172	1,761
	Fleet Vehicles	N/A	1,862	1,582
	Coal	20,538	16,941	2,064
	<b>Total (Scope 1)</b>	<b>790,587</b>	<b>605,871</b>	<b>273,483</b>
Scope 2	Electricity (Glove Manufacturing Entities) <sup>1</sup>	343,425	276,203	139,665
	Electricity (Non-Glove Manufacturing Entities) <sup>2</sup>	14,624	16,364	12,738
	<b>Total (Scope 2)</b>	<b>328,801</b>	<b>292,567</b>	<b>152,403</b>
<b>Scope 1 &amp; 2 Total</b>		<b>1,148,636</b>	<b>898,438</b>	<b>425,886</b>
<b>Intensity (tonne/1,000 pcs gloves)</b>				
* Only include Glove Manufacturing Entities		<b>0.0176</b>	<b>0.0204</b>	<b>0.0207</b>
<b>Variance (over year)</b>		<b>5.83</b>	<b>16.14</b>	<b>1.38</b>
Scope 3	Waste Generated in Operations <sup>3</sup>	N/A	4,594	1,469
	Business Travels <sup>4</sup>	0.21	339	410
	Employee Commuting <sup>5</sup>	N/A	14,983	3,057
	Downstream Leased Assets	N/A	N/A	1,097
	<b>Total (Scope 3)</b>	<b>0</b>	<b>19,916</b>	<b>6,033</b>
<b>Total (Scope 1, 2 &amp; 3)</b>		<b>1,148,636</b>	<b>918,354</b>	<b>431,919</b>

**Note:** Historical data should not change, but we always revise historical figures if data quality or science has improved.  
Data collection is using operational approach for organisational boundary.

<sup>1</sup> Data covers all glove manufacturing factories except for Factory 15 China.

<sup>2</sup> Data covers all non-glove manufacturing entities except for the owned hostel.

<sup>3</sup> Data covers all types of scheduled wastes only.

<sup>4</sup> Data covers all type of vehicles except for trains.

<sup>5</sup> Data coverage for staff commuting is 40% and 100% for workers.

\* Top Glove utilises the location-based method for calculating its Scope 2 emissions, with electricity sourced from Tenaga Nasional Berhad. Carbon emissions associated with purchased electricity (Scope 2) are determined using emission factors obtained from Suruhanjaya Tenaga Malaysia, specifically the Grid Emission Factor (GEF) for the years 2017-2019.

\* Others emission factors used in this accounting is sourced from DEFRA 2022.

## Environmental

Carbon emission in energy unit		GWh
Scope 1	Natural Gas	1,489.394
	Diesel & Petrol	6.522
	Fleet Vehicles	6.591
	Coal	6.070
Scope 2	Electricity (Glove Manufacturing Entities)	179.057
	Electricity (Non-Glove Manufacturing Entities)	16.330
Scope 3	Downstream Leased Assets	1.406
<b>Total carbon emission (GWh)</b>		<b>1,705.37</b>

### Absolute Carbon Emissions Reduction Performance

In FY2023, carbon emissions reduced to 486,435 tonnes, representing a significant 53% decrease compared to the baseline year of FY2022. However, when evaluating the relative carbon emissions in relation to the volume of gloves produced, we observed an increase level of 0.0207 tonnes of CO<sub>2</sub> emitted per 1,000 gloves manufactured.

While there is reduction in absolute emission, we acknowledge that comparing intensity emissions to glove volume has become challenging due to the dynamic business landscape, which has led to changes in production output. Despite these challenges, our commitment to sustainability remains unwavering. We are actively pursuing opportunities to optimise our carbon footprint and enhance our environmental performance.

### ENERGY MANAGEMENT

#### Management Approach:

*As one of the key resources used in our production, we aim to reduce the consumption of non-renewable energy, replacing it with clean or renewable energy.*

Top Glove has recognised the importance of effective energy management in response to the growing need for sustainable practices. In line with this commitment, we have adopted our Energy Policy, which outlines our approach to optimising energy usage, reducing our environmental impact and climate change. This Policy operates alongside our broader Sustainability Policy, demonstrating our comprehensive approach to sustainability. By mandating adherence to ISO 50001:2018 standards, we exemplify our unwavering commitment to upholding the highest standards in energy management practices. In FY2023, we retained our existing factory certifications, as no new factories were certified in response to dynamic changes in our business operations.

#### SUSTAINABILITY ROADMAP FY2022 TO FY2025

Retained **3 factories** certification with  
**ISO 50001:2018** for  
Energy Management System



Scan the QR code to view our Energy Policy



[https://www.topglove.com/storage/sustainability-policies/March2022/\(Latest\)%20Apx-02%20L%20GM%20Energy%20Policy%201.1%20\(1\)%20\(2\)%20\(1\).pdf](https://www.topglove.com/storage/sustainability-policies/March2022/(Latest)%20Apx-02%20L%20GM%20Energy%20Policy%201.1%20(1)%20(2)%20(1).pdf)

We actively manage our energy consumption by closely monitoring the absolute consumption and intensity of electricity. To facilitate this, we have implemented a Smart Energy Monitoring System (SEMS) at our selected factories. SEMS enables real-time monitoring of energy usage, allowing us to promptly identify any wastage and rectify abnormal energy consumption.

We evaluate the energy consumption of our production equipment, systems, electrical motors/pumps, compressors, and suppliers associated with Significant Energy Utilities (SEU). To ensure alignment with our practices, our internal team conducts energy audits on respective factories which allow us to assess energy usage, identify areas for improvement, and implement energy-saving measures. In addition to audits, the Energy Management team conducted training for employees on the environmental, Energy Policies, best practices and guidelines.

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In terms of demand response, we monitor and manage our electricity consumption by shifting non-essential operations to non-peak hours. This practice supports grid reliability and reduces emissions during periods of high electricity demand.

In addition, we consider energy performance as an additional criterion for the selection of purchased items and vendors, wherever applicable. We maintain regular engagement with our suppliers and vendors, emphasising our commitment to ISO 50001 Energy Management System (EnMS) compliance. We expect our suppliers to adhere to the same standards, and we actively encourage them to provide us with Energy Star-rated electrical appliances.

Since we installed our first solar panel, we have been on track to shift electricity source at our plants to renewable energy sources.

### Solar Power System Investment

Year	Green Energy Utilised for Glove Manufacturing (GWh)
FY2021	1.66
FY2022	5.75
<b>FY2023</b>	<b>5.68</b>

### SUSTAINABILITY ROADMAP FY2022 TO FY2025

**Avoided 4,430 tonnes of CO<sub>2</sub> eq**

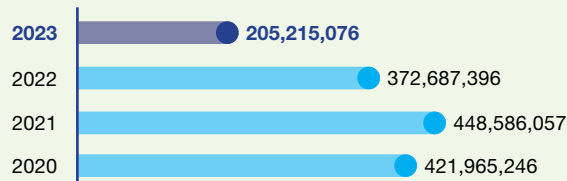
The PPA (Power Purchase Agreement) between Top Glove and Shizen Malaysia in 2022 has allowed Top Glove to expand its total capacity from 5.34 MWp to 7.74 MWp in FY2023. As a result, we anticipate approximately 4,430 tonnes of CO<sub>2</sub> eq emissions avoided annually. To put this into perspective, it is equivalent to planting approximately 203,491 trees.

### Energy Data

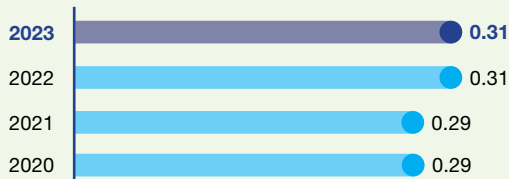
#### ELECTRICITY CONSUMPTION INTENSITY (KWh/1,000 PCS GLOVES)



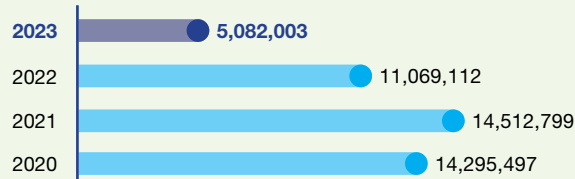
#### ABSOLUTE ELECTRICITY CONSUMPTION KWh



#### NATURAL GAS CONSUMPTION INTENSITY (MMBTU/1,000 PCS GLOVES)



#### ABSOLUTE NATURAL GAS CONSUMPTION MMBTU



**Note:** Coverage of energy data included all manufacturing plants and offices in Malaysia, Thailand, Vietnam.

Electricity consumption intensity increased from the previous year due to lower output resulting from changes in business dynamics. In contrast, natural gas consumption has remained stable, reflecting the ongoing efficiency projects despite the inconsistency in output.



## Environmental

### ENVIRONMENTAL COMPLIANCE

#### Management Approach:

*Guided by the Company's Sustainability Policy, Environmental Policy and Environmental Management System standards, we manage environmental compliance at Group level through board governance and compliance to best regulatory practices.*

The Company's dedication is evident in its systematic integration of sustainable environmental practices across all business operations, aimed at mitigating any adverse environmental impacts. Top Glove has successfully certified an additional 5 factories, bringing the total number of certified factories to 23 in accordance with ISO 14001:2015 standards. This achievement falls slightly below our committed target of certifying an additional 8 operating factories by FY2023, primarily resulting from changes in business dynamics.

#### SUSTAINABILITY ROADMAP FY2022 TO FY2025

**23 factories** certified with **ISO 14001:2018** for Environmental Management System

Top Glove demonstrates its commitment as a responsible corporate citizen by prioritising adherence to local, national, and international environmental and climate regulations. As of FY2023, the Company proudly maintains a record of zero fines (RM0 amount) or instances of non-compliance concerning air, water and land pollution or any violations of environmental regulations mandated by the Department of Environment (DOE) or other pertinent environmental acts.



Scan the QR code to view our Environmental Policy



[https://www.topglove.com/storage/sustainability-environments/November2022/Environmental%20policy%20\(English\)%20Website%20\(1\).pdf](https://www.topglove.com/storage/sustainability-environments/November2022/Environmental%20policy%20(English)%20Website%20(1).pdf)

### WATER RESOURCE MANAGEMENT

#### Management Approach:

*We address water scarcity as a global concern and we are committed to manage our water resources with a holistic water management. We are dedicated to reduce water consumption inside our operations. We track and analyse data to plan initiatives effectively that benefit to all.*

As part of our commitment to sustainable water management, we are actively working towards reducing our reliance on municipal water supply. We have implemented a comprehensive water management plan that includes upgrading our water treatment plant, enhancing our rainwater harvesting system, improving in-house water recycling facilities, and implementing strict monitoring measures to prevent water wastage. Our goal is to safeguard freshwater accessibility for the well-being of humanity. We have surpassed our goal of reducing municipal water consumption by 22%, achieving a rate of 0.1796 m<sup>3</sup>/1,000 pieces of gloves in FY2023. This commitment reflects our dedication to responsible water management and our proactive efforts to promote sustainable practices within our operations.

## Environmental

The data presented in this section encompasses all our Malaysia glove factories, reflecting our collective efforts to prioritise responsible water usage and conservation.

### Water Management

#### WATER TREATMENT PLANT (REVERSE OSMOSIS, ULTRAFILTRATION, WASTEWATER RECLAMATION)

##### Purpose

The surface water and rainwater harvested is utilised for production and housekeeping purpose.

##### Beneficiary factories

All Klang factories

##### Investment Cost

RM89,893

#### IN-HOUSE WATER RECYCLING FACILITIES

##### Purpose

Our factories are equipped with a water recycling system that allows us to reuse the treated effluent for housekeeping purposes.

##### Beneficiary factories

All factories

##### Cost Saving

RM7,683,038

#### ON SITE DETENTION (OSD) TANKS

##### Purpose

Installing on-site detention (OSD) tanks for surface water recycling can reduce drain water volume during heavy rain, enhance water security, and provide diversified water sources for factories, mitigating flood risks and overflow to surrounding land. Water collected in OSD tank will be treated and channeled to factories and stored in rainwater tank for production and housekeeping purposes.

##### Beneficiary factories

F4AW and F14AW

##### Investment Cost

RM188,580

#### INSTALLATION OF FILTERS AT PRE-LEACHING TANK

##### Purpose

By installing filters in the pre-leaching tank, we are able to conserve water resources by prolonging the usage of water and reducing the overall water consumption.

##### Beneficiary factories

All factories

##### Investment Cost

RM414,584

#### RAINWATER HARVESTING

##### Purpose

We utilise harvested rainwater for housekeeping and operational purposes. Our rainwater harvesting system, which includes tanks to retain rainwater, is designed to reduce reliance on municipal water.

##### Beneficiary factories

All factories

##### Cost Saving

RM819,088

## Environmental

### Water Data

Financial Year	FY2020	FY2021	FY2022	FY2023
<b>Water withdrawal intensity (m<sup>3</sup>/1,000 pcs gloves)</b>	<b>0.280</b>	<b>0.290</b>	<b>0.362</b>	<b>0.397</b>
<b>Municipal water withdrawal intensity (m<sup>3</sup>/1,000 pcs gloves)</b>	<b>N/A</b>	<b>0.230</b>	<b>0.222</b>	<b>0.180</b>
<b>Water consumption intensity<sup>1</sup> (m<sup>3</sup>/1,000 pcs gloves)</b>	<b>N/A</b>	<b>0.043</b>	<b>0.078</b>	<b>0.049</b>
<b>Water withdrawal at Headquarter, Top Glove Tower (m<sup>3</sup>)</b>	<b>35,436</b>	<b>34,913</b>	<b>34,340</b>	<b>36,913</b>
Grand total of Top Glove Tower users (including tenants)	1,843	1,125	1,073	861
Water withdrawal intensity (m <sup>3</sup> /occupant)	19	31	32	43
<b>Total water reclaims<sup>2</sup> (m<sup>3</sup>)</b>	<b>2,431,382</b>	<b>1,427,565</b>	<b>2,889,093</b>	<b>2,686,377</b>
Water treatment plant (from 2 water treatment plants)	1,129,229	891,616	2,352,395	2,377,621
Industrial effluent treatment system (IETS)	1,302,153	535,949	536,698	308,756
<b>Source of water withdrawal<sup>^</sup> (Total, m<sup>3</sup>)</b>	<b>18,456,616</b>	<b>18,182,568</b>	<b>16,282,460</b>	<b>8,405,774</b>
Municipal	12,498,389	14,081,233	9,689,639	3,561,405
Pond water	3,305,478	2,386,019	3,400,150	1,871,598
Rainwater	221,366	287,751	303,578	286,394
Reclaim water	2,431,382	1,427,565	2,889,093	2,686,377

<sup>1</sup> Water consumption is determined by taking the overall withdrawal and subtracting the total discharge.

<sup>2</sup> Water reclaim: Water recycling and reusing water within facilities.

<sup>^</sup> Water withdrawal is the water extracted to supply facilities.

### Baseline Water Stress (“BWS”)

The BWS analysis conducted using the World Resources Institute (WRI) database indicates that the operating factories of Top Glove are classified under low BWS, with a level of less than 1. The BWS layer, developed as part of WRI’s Aqueduct Water Risk Atlas, measures the ratio of total water withdrawals relative to the annual available renewable surface water supplies. This classification suggests that the water stress in the areas where Top Glove operates its factories is relatively low, indicating a lower level of competition and pressure on water resources. We continue to maintain regular monitoring and ongoing assessments of water stress as they are crucial to ensure the sustainability of water resources and adapt to any changes in water availability or demand.

### Baseline Water Stress According to Country of Operating Factories

Location	Water Risk Index	Indication
Malaysia	0.33 - 0.66	Low-Medium Risk
Thailand	0.33 - 0.66	
China	< 0.33	

**Note:** The data is based on all districts where Top Glove’s factories are operating in each country.



## Environmental

### WASTE & EFFLUENT MANAGEMENT

#### Management Approach:

*We do not subscribe to the attitude of “harm today, balm tomorrow”. We manage our waste and effluent in compliance with laws and regulations and are also committed to reduce waste generation through operational eco-efficiency.*

Top Glove fully endorses the waste management hierarchy and remains dedicated to implementing its principles in daily operations. Our commitment lies in embracing the 5R principles of waste management. We actively focus on preventing wastages, **reducing** waste generation, promoting the **reuse** of waste to maximise its value, facilitating the **recycling** of waste for a second life, **recovering** waste as valuable energy resources, and ensuring the **responsible** disposal of waste.

#### Waste Management

##### Engaged with Department of Environment (“DOE”) licensed collector

In our commitment to responsible waste management, we actively engage with licensed waste collectors authorised by the DOE. These licensed collectors adhere to stringent environmental regulations and standards, ensuring that our waste is handled and disposed of responsibly. By partnering with DOE-licensed collectors, we prioritise compliance and environmental responsibility throughout our waste management processes.

##### Monitoring Reporting

We maintain a consistent waste monitoring and reporting system to track and analyse our waste generation and disposal practices. This system allows us to assess our waste reduction efforts, identify areas for improvement, and measure progress towards our sustainability goals. Regular reports are generated to provide transparency and accountability to stakeholders, showcasing our commitment to sustainable waste management.

##### Training & Education

We believe in the importance of fostering a culture of sustainability throughout our organisation. To achieve this, we provide training and education programmes to our employees and stakeholders. These programmes raise awareness about the importance of responsible waste management, highlight best practices, and promote waste reduction strategies, all of which contribute to reducing the environmental impact. By equipping our team with the knowledge and skills to make sustainable choices, we ensure that waste management is integrated into our daily operations.

##### Site audit on licensed scheduled waste collectors

To ensure the responsible handling of our waste, we conduct site audits on our licensed scheduled waste collectors. These audits encompass a comprehensive assessment of their facilities, equipment, and waste management procedures. By regularly evaluating our waste partners, we verify their compliance with environmental regulations and our sustainability standards, mitigating potential environmental risks.

##### Research and Development (R&D)

Continuous improvement in waste management practices is essential to our sustainability efforts. Therefore, we invest in R&D initiatives aimed at finding innovative solutions to reduce waste generation, improve recycling rates, and minimise the environmental impact of our waste streams. In FY2023, one of our collaborations with a supplier involves converting scheduled waste into bricks.

#### Operational Resource Optimisation and Waste Reduction Initiatives

##### Digitalisation to move for less paper

As part of our commitment to responsible consumption, Top Glove diligently monitors the quantities of paper and virgin plastic stretch film utilised in our operations. This represents a significant stride toward our overarching objective of transforming into a paperless and plastic-free company. In FY2023, we successfully reduced paper usage by 80.8%, surpassing our target of a 40% reduction (37,800 kg) for the year.

#### SUSTAINABILITY ROADMAP FY2022 TO FY2025

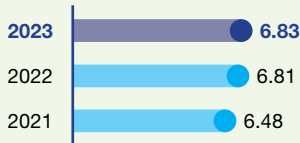
**80.8%** reduction of paper usage in FY2023

## Environmental

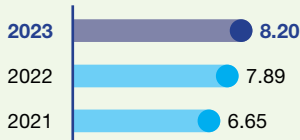
### Material Consumption

We initiated material consumption monitoring several years ago as part of our commitment to responsible consumption.

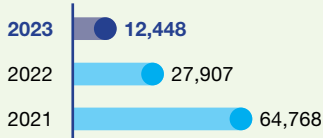
#### LATEX CONSUMPTION (KG/1,000 PCS OF GLOVES)



#### NITRILE CONSUMPTION (KG/1,000 PCS OF GLOVES)



#### PAPER USED (KG)



**Note:** The consumption of raw material is dependent on glove weight requested by customer.

### Circular Economy Activities

R&D is at the core of our business sustainability. We promote the adoption of circular economy principles to effectively manage waste generated during glove production. Notably, common waste materials like tainted formers and used rubber are subjected to recycling or upcycling processes to derive added value. The tainted formers undergo a reglazing process to eliminate surface contaminants and subsequently reintegrated into the production cycle. Similarly, nitrile waste is processed and transformed into new products such as rubber compounds, coaster, insulation mats, mousepads, shoe outsoles and more, thereby extending the lifecycle and enhancing the sustainability of these materials.



### Recycling and Upcycling of Waste

<b>Former Recycled</b>	<ul style="list-style-type: none"> <li>Approximately 93,899 formers were reglazed and reused</li> <li>Cost savings from waste disposal: RM125,700 in FY2023</li> <li>Cost savings from former reglazing exercise: RM398,100 in FY2023</li> </ul>
<b>Rubber Reclaimed</b>	<ul style="list-style-type: none"> <li>Rubber Reclaimed Project estimated to reduce CO<sub>2</sub> eq emissions by 103.3 tonnes, by preventing 35,089 kg of nitrile waste being incinerated in FY2023</li> <li>Estimated landfill mitigation: 70.2 m<sup>3</sup></li> <li>Production of the following from torn nitrile gloves: <ul style="list-style-type: none"> <li>6,150 kg of rubber compound</li> <li>2,556 pcs of rubber coaster</li> <li>847 pcs of rubber mousepad</li> <li>520 pairs of shoe outsole</li> <li>95 pcs of rubber mats</li> <li>50 pcs of electrical insulation mats</li> </ul> </li> <li>Revenue: RM148,800</li> <li>Cost savings: RM71,000</li> </ul>

## Environmental

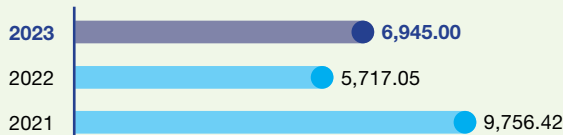
### Achievement Awards in Prime Minister's Hibiscus Award 2021/2022



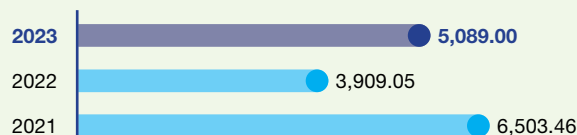
We are delighted to share that Top Glove has achieved highly commendable success at the Prime Minister's Hibiscus Awards 2021/2022, receiving a total of three awards. Notably, Top Glove's Factory 9 has been honored with the Notable Achievement Awards in Environmental Performance, underscoring our commitment to a greener future. Furthermore, Factory 30 has achieved the remarkable feat of winning the Gold Winner title in the Special Project Award, along with the Notable Achievement Awards. These accolades serve as a testament to our dedication to environmental protection and sustainable development. We also extend our appreciation to our stakeholders for their trust and support. Together, we strive for a brighter and more sustainable tomorrow.

### Scheduled Waste Data

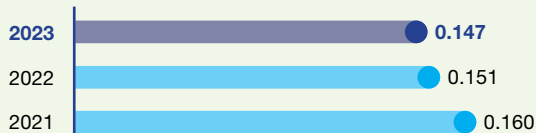
#### SCHEDULED WASTE GENERATED (TONNES)



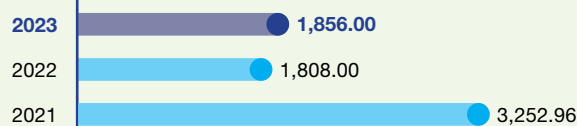
#### TOTAL SCHEDULED WASTE REUSED/ RECYCLED/ OTHER RECOVERY PROCESS (TONNES)



#### SCHEDULED WASTE INTENSITY (KG/1,000 PCS GLOVES)



#### TOTAL SCHEDULED WASTE DISPOSAL THROUGH INCINERATION (WITH OR WITHOUT ENERGY RECOVERY), LANDFILLING, OTHER DISPOSAL OPERATIONS (TONNES)

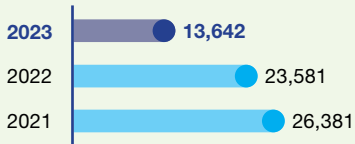




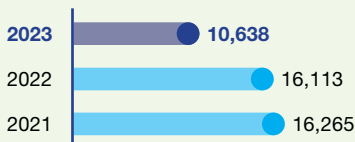
## Environmental

### Solid Waste Data

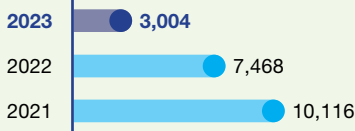
#### TOTAL SOLID WASTE GENERATED (TONNES)



#### TOTAL SOLID WASTE REUSED/ RECYCLED/ OTHER RECOVERY PROCESS (TONNES)



#### TOTAL SOLID WASTE DISPOSED THROUGH INCINERATION (WITH OR WITHOUT ENERGY RECOVERY), LANDFILLING, OTHER DISPOSAL OPERATIONS (TONNES)



Aligning with FY2025 goals, we have achieved targets in FY2023.

#### SUSTAINABILITY ROADMAP FY2022 TO FY2025

**Reduced 7%** of scheduled waste intensity

**Diverted 73%** of scheduled waste from licensed landfill

### Water, Land and Air Pollution Control

#### Effluent Treatment

Effluent management is a vital aspect of our commitment to environmental sustainability. We have implemented comprehensive effluent treatment processes to ensure that any effluent generated during our operations is treated to meet regulatory standards. Our treatment facilities are designed to remove harmful pollutants, ensuring that only treated, safe effluent is discharged into the environment.

#### Monitoring and Compliance

We maintain strict monitoring protocols to assess the quality of our effluent continuously. Regular sampling and analysis are conducted to verify compliance with local, national, and international environmental regulations. By closely monitoring our effluent, we proactively identify any deviations from compliance and take corrective actions promptly to mitigate environmental impacts.

#### Awareness and Education

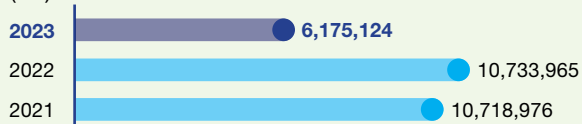
We understand the importance of creating awareness and educating our employees, stakeholders, and the community about the significance of effluent management for pollution control. Our awareness and education programmes aim to inform and engage individuals in responsible water use, effluent treatment, and pollution prevention. We believe that informed stakeholders are essential partners in our efforts to protect the environment.

#### Established Group Key Performance Indicators (KPIs)

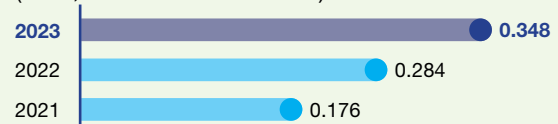
To measure the effectiveness of our effluent management efforts, we have established a set of Key Performance Indicators (KPIs) that align with our sustainability goals. These KPIs include metrics related to effluent quality, reduction in waste intensity, and compliance measures. Regularly tracking and reporting on these KPIs helps us gauge our progress and drive continuous improvement in our pollution control strategies.

### Effluent Data

#### TOTAL WATER DISCHARGED (M<sup>3</sup>)



#### DISCHARGE INTENSITY (M<sup>3</sup>/1,000 PCS OF GLOVES)



## Environmental

Financial Year	2021	2022	2023
Water Quality: Environmental Quality (Industrial Effluent) Regulations 2009	Standard B for All Top Glove's Malaysia Factories except Factory 33 (Nilai) complies to Standard A		
Location of Final Discharge for Malaysia Factories	Meru factories: Sg. Kapar Kechil Banting, Selangor: Sg. Langat Lukut, Negeri Sembilan: Sg. Sendayan Nilai, Negeri Sembilan: Sg. Semenyih Kulim, Kedah: Lembangan Sg. Perai Kota Bharu, Kelantan: Sg. Raja Gali		

### SUSTAINABLE PRODUCT MANAGEMENT

During the FY2023, R&D took significant strides in expanding our green product portfolio Biogreen™ as part of our commitment to addressing two critical global challenges: waste accumulation and climate change. To this end, we introduced two distinct product categories: The Biodegradable Series and the Renewable Series. These products are the result of our dedicated research aimed at developing gloves with a low carbon footprint by using renewable materials and minimising environmental impact.

Under the **Biodegradable Series**, we developed a range of gloves utilising environmentally friendly materials such as Nitrile Butadiene Rubber (NBR), Casting Polyethylene (CPE), and Thermoplastic Elastomer (TPE). These gloves are specifically designed to combat waste accumulation in active landfills through a process of anaerobic biodegradation facilitated by microbial activity. By employing this innovative approach, we aim to significantly reduce the environmental impact associated with glove disposal.

Our **Renewable Series** focuses on promoting the adoption of sustainable practices in glove production. This involves encouraging the use of renewable plant-based materials or responsible management of the forestry throughout the glove's lifecycle. By prioritising sustainability and carbon reduction, we aim to contribute to the mitigation of climate change.

#### Life Cycle Assessment

In addition to the Life Cycle Assessment ("LCA") conducted for our Biogreen™ Biodegradable Series and partial LCA for Plant-Based CPE Gloves, this year we are continuing our LCA efforts in line with ISO 14040 and ISO 14044 standards. We have recently taken a substantial stride in advancing our operations by instituting a specialised R&D Task Force dedicated to conducting LCA within our Top Glove's factories. Our comprehensive evaluation encompasses various facets of the product's life cycle, spanning from the selection of raw materials, the direct production process, and the distribution of goods, to the management of end-of-life considerations.

In alignment with our commitment to product risk management, this initiative places significant emphasis on the incorporation of sustainable and REACH-compliant materials to mitigate the presence of restricted substances in our products for the good sake on human health and environmental benefits. Its overarching objective is to bolster our internal capabilities and streamline the LCA process, thereby enabling us to more effectively address the criteria governing both product and process design.



Scan the QR code for more information about List of products in website



<https://www.topglove.com/products>

#### Biodegradable Series



Biogreen™ Biodegradable Nitrile Glove



Biogreen™ Biodegradable CPE Glove



Biogreen™ Biodegradable TPE Top Grip Glove

#### Renewable Series



Biogreen™ Plant-Based CPE Glove



Biogreen™ FSCTM Certified Latex Glove

## Environmental

### R&D Open Innovation in Top Glove

Top Glove recognises the power of open innovation and actively cultivates long-term partnerships with external parties such as universities and research institutions. These collaborations have become instrumental in our R&D endeavours, propelling us towards cutting-edge advancements and social impact. Our engagement in extensive research collaborations spans across multiple domains, including new product development, process improvement, and wastewater treatment. The costs involved in R&D across multiple domains can be found in the TCFD and Water Management sections.

In the pursuit of operational excellence and sustainability, our collaborations in process improvement have yielded significant benefits. By partnering with universities and research institutions, we harness their expertise to optimise our manufacturing techniques, streamline processes, and enhance operational efficiency. This allows us to reduce waste generation, minimise resource consumption, and mitigate our environmental impact. Through our commitment to open innovation and collaboration, we actively contribute to social responsibility by implementing sustainable practices in our operations. Together with our external partners, we strive to create a more sustainable future, where glove manufacturing is synonymous with responsible and environmentally conscious practices.

### Collaboration Partner

Our R&D Department has on going collaboration with a nitrile latex supplier to innovate glove products which require low energy consumption and is able to be produced at consistently high quality. This marked our commitment to accelerate Top Glove sustainability initiatives through partnerships.

### SUSTAINABLE PACKAGING MATERIALS

#### Management Approach:

*Top Glove advocates ethical and responsible sourcing and procurement practices. The Company recognises that its supply chain has a significant impact on the well-being of the environment and is committed to minimising any adverse effects. This commitment reflects the Company's dedication to sustainable practices and its recognition of the importance of environmental stewardship.*

We are committed to minimising the packaging needed for our products and ensuring responsible management of packaging. We are actively exploring alternative materials and recycled plastics to replace non-recyclable items. Our focus includes developing bottles made from recycled plastic materials and introducing refill packs for liquid detergent, aimed at reducing overall plastic consumption. However, our progress in transitioning to the use of recycled plastic bottles and refill packs currently stands at 0% due to shifts in the business landscape.

Top Glove remains steadfast in its commitment to reduce plastic packaging usage and launched the 'Top Glove No Single Use Plastic Campaign' in May 2022, which continues until today. As part of our ongoing efforts, we have also actively investigated alternative materials to replace plastic containers provided by our canteen operators. These operators have transitioned to using washable and reusable containers for dine-in orders, while opting for paper or sugarcane materials for takeout orders. We further promote eco-conscious practices by encouraging our employees to bring their own food, fostering a culture of sustainability within our organisation.

Our in-house Packaging Material Plant is FSC certified. This certification signify our dedication to responsible sourcing practices and underscore our commitment to meeting recognised standards for environmental sustainability. Currently, approximately 98% of our packaging materials, in terms of quantity, are derived from recycled or recyclable sources. This demonstrates our commitment to reducing waste and minimising our environmental impact. Our objectives encompass several sustainability initiatives aimed at minimising our environmental impact. These collective efforts reflect our dedication to sustainable practices and responsible sourcing. Our efforts also extend to tracking the reduction of virgin plastic resin usage in stretch film. We are pleased to report an 19.2% reduction in plastic resin usage, bringing us close to our FY2023 target.

#### SUSTAINABILITY ROADMAP FY2022 TO FY2025

**86%** inner boxes purchased is made with **100%** recycled material or **FSC** paper

Maintain existing certification for packaging material factory for **FSC**

**19.2%** of reduction of virgin plastic resin

### BIODIVERSITY & CONSERVATION

#### Management Approach:

*We believe that the preservation of biodiversity is essential for maintaining the balance of ecosystems, protecting endangered species, and safeguarding the natural heritage of our planet. As part of our sustainability commitments, we work to identify, conserve, and restore biodiversity within our operations and the surrounding areas.*

To effectively address biodiversity conservation, we engage in joint initiatives and community-based conservation projects that aim to protect and enhance biodiversity. As stated in our Sustainability Policy, our commitment to protecting biodiversity extends to the supply chain and is reflected in our Business Partners' Code of Conduct.



## Environmental

### Conservation Initiatives

#### Mangrove Nursery & Plantation



In a collaborative effort, the Top Glove Foundation worked together with the Kampung Sijangkang communities to undertake a remarkable project. Their goal was to turn an illegal dumpsite into an educational park and enhance an existing mangrove plantation to establish a mangrove recreational park. Mangroves unique ecosystem, known as 'blue carbon' environments,

have the remarkable ability to store significant amounts of carbon over extended periods. By safeguarding and preserving mangroves, we actively contribute to the reduction of GHG emissions and support climate change mitigation efforts. Top Glove has built the first 3 nurseries, and as of FY2023, we have harvested a total of 3,450 mangrove propagules. We plan to propagate another 2,000 mangrove propagules by FY2025 to sustain the preservation of mangrove site.

#### Tree Planting



*Paulownia in Bangka*



*Acacia in Belitung*

Top Glove has taken the initiative to plant trees on its 96.4-hectare land in Bangka and Belitung, Indonesia. From 2020 to the present, the land has accommodated 57,970 Paulownia trees and 45,318 Acacia trees, all of which were cultivated from seedlings grown in Top Glove's tissue culture lab established in 2019.

In addition to tree planting, Top Glove has expanded its conservation activities in FY2023. The Company has diversified its cultivation efforts to include other types of plants such as bananas and orchids. Through this plantation, Top Glove is not only contributing to the conservation of biodiversity but also making a positive impact on the environment. The extensive tree planting efforts have enabled the absorption of approximately 2,169 tonnes of carbon dioxide<sup>1</sup>.

<sup>1</sup> 1 trees absorbed approximately 21 kg of carbon dioxide annually



## Environmental

Planting location/year	2021	2022	2023
Bangka	24,642	27,101	2,126
Belitung	N/A	20,354	1,405

Cultivation type/year	2021	2022	2023
Paulownia	960,000	960,000	420,000
Orchids	N/A	N/A	200
Banana	N/A	90	N/A

Since FY2022, we have been offering internship opportunities to the local community in Indonesia, including high school and university students. In FY2023, the employment details are presented in the table below:

No.	Institution	Number of employees	Gender	Nationality
1	SMA Negeri 1 Kelapa	2	2 Male	Indonesians
2	SMA Negeri 1 Mendo Barat	4	2 Male, 2 Female	Indonesians
3	University Bangka Belitung	2	2 Male	Indonesians

