

# SUSTAINABILITY IN SUPPLY CHAIN MANAGEMENT

## MSc in Sustainable and Green Finance | August 2025

TEAM: Anukriti Choubey, Ei Thin Zar, Hui Tok Chung Calvin, Yash Chhabra

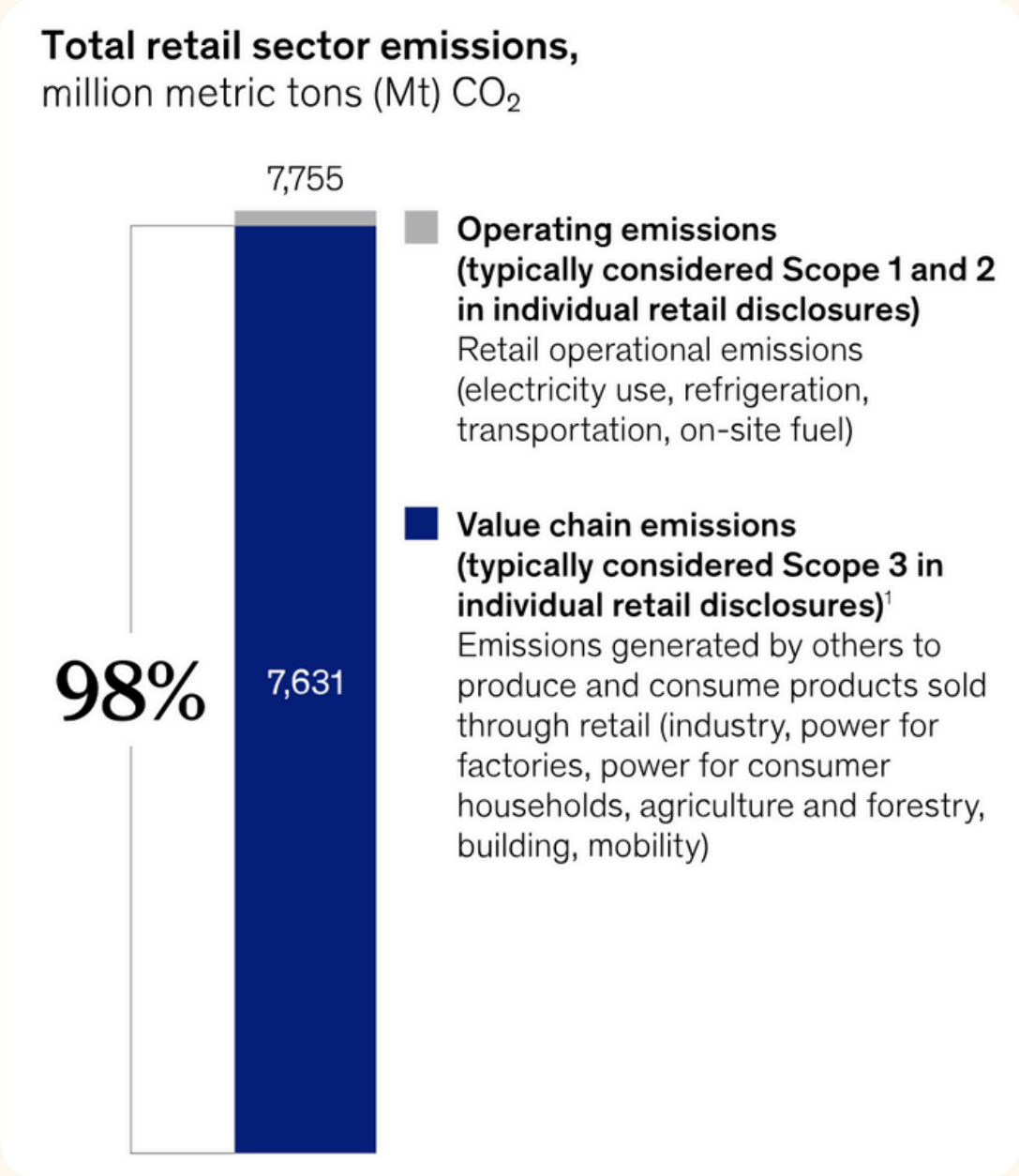
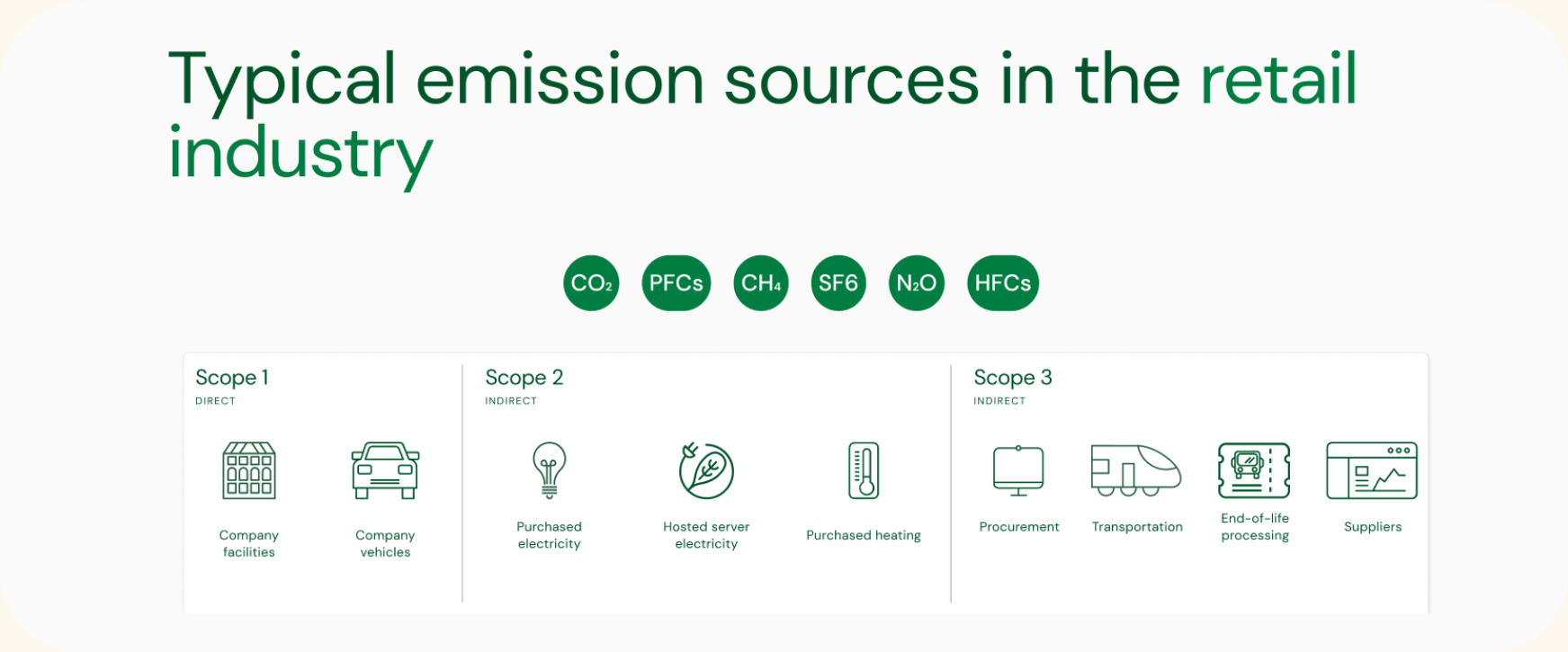
SUPERVISOR: Prof. Mabel Chou

**Project Objective:** To explore how Asian Retail Queen Bee companies can address sustainability challenges and opportunities in their supply chains

### Overview









**Global retail sales** are projected to reach **\$30.6 trillion in 2024**, with forecasts indicating growth to over **\$35.8 trillion by 2030**.

The retail sector is one of the **top 10 most carbon-intensive industries**, responsible for **~25% of global GHGs**.



McKinsey & Company: Retailers' climate road map: Charting paths to decarbonized value chains

### Sustainability Practices of Asian Queen Bees’

ASIAN QUEEN BEES’	REGION	SUPPLIER CODE OF CONDUCT	CARBON/NZ TARGET	SUSTAINABLE SOURCING	WASTE REDUCTION INITIATIVES	LOCAL/SME SUPPLIER SUPPORT
DFI Retail		Active targets/ initiatives	In Progress	Active targets/ initiatives	Active targets/ initiatives	In Progress
D-Mart		Active targets/ initiatives	No mention of the indicator	In Progress	Active targets/ initiatives	Active targets/ initiatives
Reliance Retail		Active targets/ initiatives	In Progress	Active targets/ initiatives	Active targets/ initiatives	Active targets/ initiatives
AEON		Active targets/ initiatives	In Progress	Active targets/ initiatives	In Progress	Active targets/ initiatives
LuLu Group		Active targets/ initiatives	In Progress	Active targets/ initiatives	Active targets/ initiatives	No mention of the indicator
E-Mart		Active targets/ initiatives	In Progress	Active targets/ initiatives	Active targets/ initiatives	Active targets/ initiatives
NTUC Fairprice		Active targets/ initiatives	In Progress	Active targets/ initiatives	Active targets/ initiatives	Active targets/ initiatives
ShengSiong		Active targets/ initiatives	In Progress	Active targets/ initiatives	Active targets/ initiatives	Active targets/ initiatives

Legend: Active targets/ initiatives In Progress No mention of the indicator

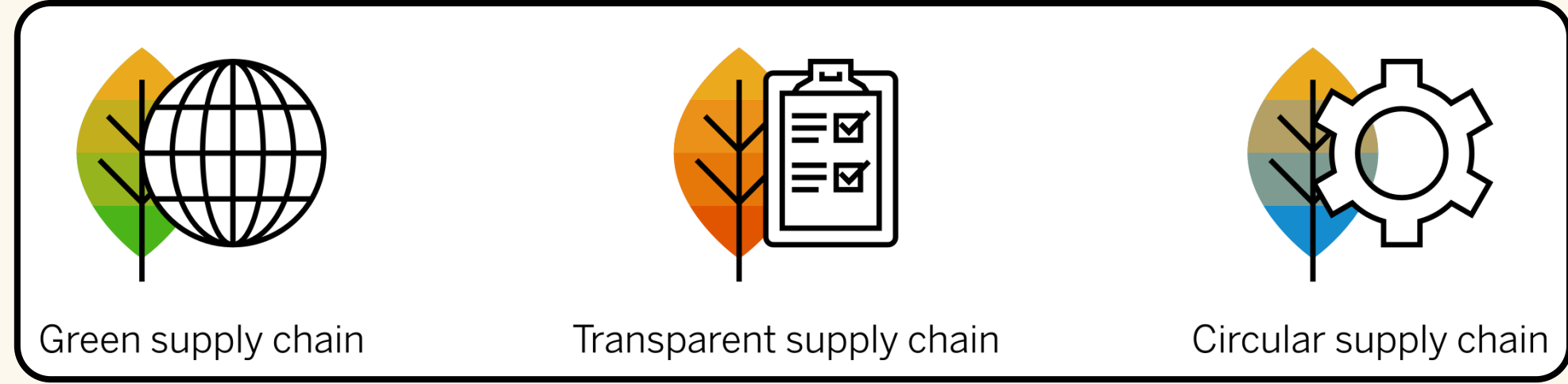
*Based on the latest publicly available Sustainability Reports*

### Sustainability Practices of Global Queen Bees’

Companies we looked at:



Main focus:



Sustainable Practices include:

- Scope 3 Emissions Measurement & Reduction
- Sustainable Sourcing Certifications
- Traceability & Transparency Tools using blockchain technology
- Food and Plastic Waste Reduction strategies

### Opportunities for Asian Queen Bees

	Opportunity Area	Why It’s Beneficial for Queen Bees’	Suggested Actions
QUICK WINS <2 years	AI for Food Waste Reduction	Reduces cost, enhances operational efficiency and inventory accuracy	Use AI to forecast demand, optimize inventory, and automate markdown pricing (e.g., near-expiry discounting) to minimize retail food waste
	AI-Based Energy Optimization	Supports Scope 2 emissions reduction, improves building energy efficiency	Deploy AI-driven energy management systems (e.g., for HVAC, lighting, refrigeration) in retail and warehouse environments
LONG TERM GOALS >5 years	Deforestation-Free Sourcing	Aligns with climate goals, supports biodiversity, reduces reputational risk and regulatory risk	Conduct deforestation risk mapping for priority commodities such as palm oil, rice, rubber and pulses and partner with organization such WWF, Rainforest Alliance, and Earthworm Foundation.
	Regenerative Agriculture	Enhances food security, soil resilience, long-term cost savings	Design and manage pilot programs with smallholder farms; provide monitoring frameworks (e.g. soil health KPIs, carbon sequestration data) and develop supplier training modules.
	Scope 3 Emissions Accounting	Prepares for future ESG regulations (e.g. CSRD), improves full carbon footprint visibility	Use EcoVadis scorecards and documentation to collect supplier ESG data; align with GHG Protocol Scope 3 categories for emissions inventory.
	Blockchain-Based Traceability	Builds consumer trust, enhances crisis response (e.g., recalls), supports ethical sourcing claims	Integrate digital traceability tools; pair with EcoVadis monitoring to validate ethical sourcing claims and supplier risk tracking.