INDORAMA VENTURES

Annual Registration Statements
Annual Report 2023
(Form 56-1 One Report)

Indorama Ventures Public Company Limited

Purpose

Reimagining chemistry together to create a better world.

Vision

To be a world-class sustainable chemical company making great products for society.

Mission

We commit to be a responsible industry leader leveraging on the excellence of our people, processes, and technologies to create value for our stakeholders.

Values

The customer is why we exist.

We measure ourselves by our customers' success. Through unparalleled innovation and attention to quality we aim to exceed their expectations.

Our people make the difference.

A company is its people and people provide the competitive advantage. We respect every voice and rely on one another to grow.

We see change as an opportunity.

The business landscape is constantly evolving. We embrace the challenges of change to be world-class and maintain our differentiation.

Diversity is our strength.

As a global company we value the variety of knowledge, perspectives and experiences in our organization, and draw strength from these to fuel our competitiveness.

We are responsible.

In our pursuit of business growth and profitability we do things the right way – economically, socially, and environmentally. Furthermore, health and safety are non-negotiable.

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Business Operations

Nature of Business

Management Discussion and Analysis (MD&A)

Business Drivers for Sustainability

Performance Highlights

US$million *(except where stated otherwise)*	USD Million		
	2021	2022	2023
Production Volume (MMT)[3]	**14.72**	**14.65**	**13.92**
Sales Volume (MMT)[3]	**14.83**	**14.68**	**14.08**
Consolidated Revenue[1]	14,629	18,715	15,555
EBITDA[2]	**1,982**	**2,387**	**1,120**
Combined PET	1,353	1,411	553
Integrated Oxides and Derivatives	346	743	440
Fibers	297	233	107
EBIT	1,303	1,653	325
Net Profit after Tax and NCI	**822**	**884**	**(310)**
Net Profit after Tax and NCI (THB m)	26,288	31,006	(10,798)
EPS after PERP Interest (THB)	**4.55**	**5.39**	**(2.06)**
EBITDA/T ($)	**135**	**163**	**81**
Operating Cash Flow	**1,055**	**2,224**	**1,526**
Net Operating Debt to Equity (times)	**0.84**	**0.96**	**1.13**

* Combined PET includes Integrated PET, Specialty Chemicals and Packaging.

[1] Consolidated financials are based upon elimination of intra-company or intra-business segment transactions.

[2] Total of each segment may not always tally with consolidated financials due to holding segment.

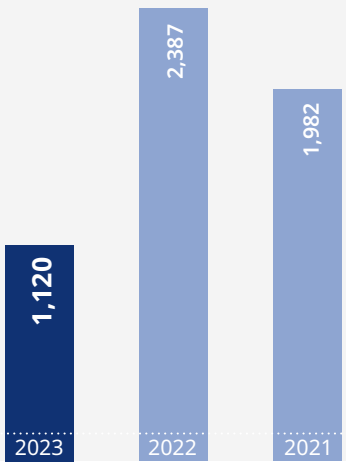
[3] Volumes exclude PX and ethylene being captive.

US$million *(except where stated otherwise)*	USD Million		
	2021	2022	2023
Net profit after Tax and NCI	**822**	**884**	**(310)**
Rationalization of footprint (impairments)	-	237	308
Tax on impairments	-	-	(65)
Extraordinary taxes	-	(46)	-
Impairments - provision of expenses and inventory	-	23	-
Extraordinary currency impact	-	-	18
Acquisition cost and pre-operative expense	9	17	11
(Gain) loss on disposal of property, plant and equipment, net	4	(3)	3
Insurance income	(9)	(91)	(13)
Impairment loss of PPE	9	10	0
Lakes Charles cracker (IVOL) performance	73	-	-
Other extraordinaries (income)/expense	(12)	12	30
Inventory (gains)/losses	(274)	(76)	115
Tax on inventory gains/losses	62	19	(29)
= Core Net Profit after Tax and NCI	**684**	**986**	**67**

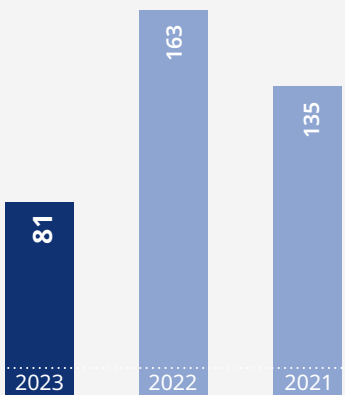
Performance Charts

Net Sales
(US$ Million)

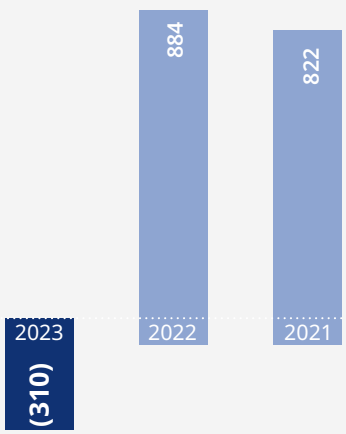
EBITDA
(US$ Million)



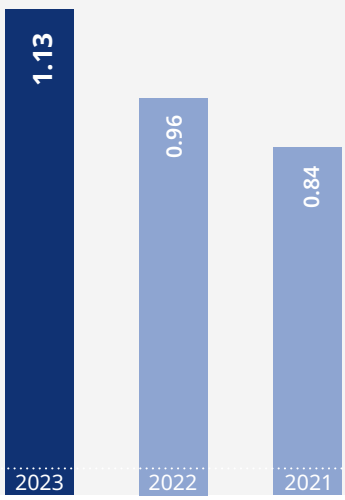
EBITDA/ton
($)



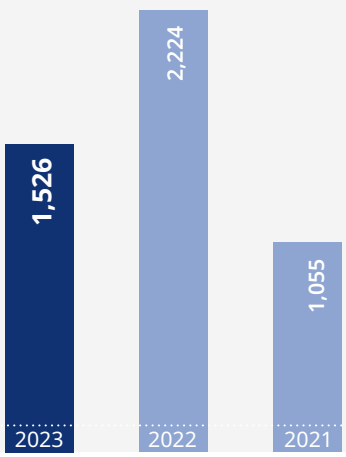
Net Profit after Tax and NCI
(US$ Million)



Net Operating Debt to Equity
(times)



Operating Cash Flow
(US$ Million)



Financial Status and Performance

Financial Information

The consolidated and separate financial statements for the year ended December 31, 2021, 2022, and 2023 were audited by Mr. Yoottapong Soontalinka, Certified Public Accountant, with registration No. 10604 at KPMG Phoomchai Audit Ltd.

Summary of audit report by the Certified Public Accountant of the Company

Financial statements for the year ended 31 December 2023

The auditor gave an opinion that the accompanying consolidated and separate financial statements present fairly, in all material respects, the financial position of the Group and the Company, respectively, as at 31 December 2023 and their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRSs).

Key audit matters are as follows:

At 31 December 2023, the Group identified that the impairment indicators existed in some Cash Generating Units ("CGUs"). Therefore, the Group performed impairment assessments for these CGUs by applying the value-in-use (discounted cash flow ("DCF")) method to determine the recoverable amount of these CGUs. Due to the significant judgment and complexities involved in determining the future cash flows attributable to CGUs, the auditor considered the measurement of the recoverable amount derived from the value in use as a key audit matter.

As at 31 December 2023, the Group had goodwill of Baht 17,584 million. The Cash Generating Units ("CGUs") to which the goodwill belongs are tested for impairment annually. The Group applies the value-in-use (DCF) method to determine the recoverable amount of each CGU to which goodwill belongs. Any shortfall of the recoverable amounts against the carrying amounts would be recognized as impairment losses. Due to the materiality of the balances and the significant judgment and complexities involved in determining the future cash flows attributable to the individual CGU to which goodwill belongs, the auditor considered the measurement of the recoverable amount as a key audit matter.

The following table sets forth a summary of the consolidated financial statements of Indorama Ventures Public Company Limited from 2021 to 2023

Statements of Financial Position (Consolidated Financial Statements)

Unit: Baht million	As of December 31					
	2021	%	2022	%	2023	%
Assets						
Current assets						
Cash and cash equivalents	16,215.3	3.0	21,211.1	3.4	18,682.6	3.2
Current investments	240.5	0.0	533.2	0.1	1,074.3	0.2
Trade accounts receivable	53,171.9	9.8	55,580.3	8.9	51,113.5	8.7
Other receivables	3,294.6	0.6	2,708.0	0.4	1,284.3	0.2
Short-term loans to related parties and interest receivable from related parties	30.2	0.0	23.7	0.0	115.7	0.0
Inventories	88,979.0	16.4	115,872.3	18.6	96,656.6	16.4
Other current financial assets	913.8	0.2	1,312.6	0.2	1,034.0	0.2
Other current assets	14,013.8	2.6	18,466.7	3.0	19,393.2	3.3
Total current assets	**176,859.1**	**32.6**	**215,707.8**	**34.6**	**189,354.2**	**32.1**
Non-current assets						
Other non-current financial assets	983.3	0.2	6,685.5	1.1	1,956.6	0.3

Unit: Baht million	As of December 31					
	2021	%	2022	%	2023	%
Investments in associate and joint ventures *(2021: Investments in joint ventures)*	3,488.7	0.6	3,729.1	0.6	3,798.8	0.6
Other long-term investments	114.3	0.0	336.0	0.1	295.0	0.0
Long-term loans to related parties	-	-	-	-	342.2	0.1
Property, plant and equipment	291,676.9	53.8	320,630.1	51.4	312,392.9	52.9
Right-of-use assets	11,450.2	2.1	12,393.4	2.0	14,982.3	2.5
Goodwill	17,410.6	3.2	17,888.2	2.9	17,583.8	3.0
Intangible assets other than goodwill	33,869.3	6.3	34,684.5	5.6	34,672.3	5.9
Deferred tax assets	2,657.0	0.5	4,540.5	0.7	6,853.6	1.2
Other non-current assets	3,318.6	0.6	7,283.3	1.2	7,900.3	1.3
Total non-current assets	**364,969.1**	**67.4**	**408,170.6**	**65.4**	**400,777.8**	**67.9**
Total assets	**541,828.2**	**100.0**	**623,878.4**	**100.0**	**590,132.0**	**100.0**
Liabilities and equity						
Current liabilities						
Bank overdrafts and short-term loans from financial institutions	26,618.8	4.9	31,247.8	5.0	28,419.2	4.8
Trade accounts payable	90,875.9	16.8	106,720.7	17.1	101,934.9	17.3
Current portion of long-term loans from financial institutions	9,587.6	1.8	28,502.0	4.6	22,977.6	3.9
Current portion of debentures	7,783.8	1.4	5,274.9	0.8	15,558.2	2.6
Current portion of lease liabilities	1,831.3	0.3	2,254.9	0.4	2,448.4	0.4
Corporate income tax payable *(2021 and 2022: Income tax payable)*	3,029.7	0.6	2,899.3	0.5	1,642.6	0.3
Other current financial liabilities	237.5	0.0	2,142.1	0.3	1,862.9	0.3
Other current liabilities	21,156.2	3.9	23,158.6	3.7	26,503.3	4.5
Total current liabilities	**161,120.7**	**29.7**	**202,200.4**	**32.4**	**201,347.2**	**34.1**
Non-current liabilities						
Long-term loans from financial institutions	101,076.2	18.7	102,464.1	16.4	103,310.1	17.5
Lease liabilities	8,512.0	1.6	8,645.4	1.4	11,104.7	1.9
Debentures	68,816.7	12.7	75,924.2	12.2	70,513.9	11.9
Deferred tax liabilities	19,902.5	3.7	19,529.1	3.1	15,678.2	2.7
Non-current provisions for employee benefits	7,499.7	1.4	6,172.8	1.0	6,594.1	1.1
Other non-current financial liabilities	2,331.9	0.4	625.5	0.1	321.3	0.1
Other non-current liabilities	1,565.1	0.3	7,431.5	1.2	3,194.6	0.5
Total non-current liabilities	**209,704.1**	**38.7**	**220,792.6**	**35.4**	**210,716.8**	**35.7**
Total liabilities	**370,824.8**	**68.4**	**422,993.0**	**67.8**	**412,064.0**	**69.8**
Equity						
Share capital:						
Authorized share capital	5,666.0	1.0	5,670.7	0.9	5,670.7	1.0
Issued and paid-up share capital	5,614.6	1.0	5,614.6	0.9	5,614.6	1.0
Share premium:						
Share premium on ordinary shares	60,331.4	11.1	60,331.4	9.7	60,331.4	10.2
Hedging reserve	812.6	0.1	4,988.0	0.8	2,335.7	0.4
Translation reserve	(6,036.1)	(1.1)	(6,494.9)	(1.0)	(7,228.3)	(1.2)

Unit: Baht million	As of December 31					
	2021	%	2022	%	2023	%
Excess of cost over book value of acquired subsidiaries	(4,115.2)	(0.8)	(4,115.2)	(0.7)	(4,115.2)	(0.7)
Differences arising from common control transactions	(1,235.6)	(0.2)	(1,235.6)	(0.2)	(1,235.6)	(0.2)
Retained earnings						
Appropriated						
Legal reserve	6,508.0	1.2	9,112.1	1.5	10,041.3	1.7
Unappropriated	81,984.3	15.1	102,884.6	16.5	83,713.7	14.2
Subordinated perpetual debentures	14,904.8	2.8	14,904.8	2.4	14,904.8	2.5
Equity attributable to owners of the Company *(2021: Equity attributable to owners of the parent)*	**158,768.7**	**29.3**	**185,989.7**	**29.8**	**164,362.3**	**27.9**
Non-controlling interests	12,234.8	2.3	14,895.7	2.4	13,705.6	2.3
Total equity	**171,003.4**	**31.6**	**200,885.4**	**32.2**	**178,067.9**	**30.2**
Total liabilities and equity	**541,828.2**	**100.0**	**623,878.4**	**100.0**	**590,132.0**	**100.0**

Statements of Income (Consolidated Financial Statements)

Unit: Baht million	For the year ended December 31					
	2021	%	2022	%	2023	%
Income *(2021: Revenue)*						
Revenue from sale of goods	468,108.3	100.0	656,266.4	100.0	541,458.0	100.0
Net foreign exchange gain	-	-	976.1	0.1	-	-
Other income	4,748.9	1.0	8,335.4	1.3	5,091.1	0.9
Total income *(2021:Total Revenue)*	**472,857.2**	**101.0**	**665,577.9**	**101.4**	**546,549.2**	**100.9**
Expenses						
Cost of sales of goods	383,128.0	81.8	544,321.3	82.9	476,039.3	87.9
Distribution costs	27,849.6	5.9	36,701.7	5.6	28,439.0	5.3
Administrative expenses	19,172.7	4.1	25,714.3	3.9	29,730.0	5.5
Impairment loss of property, plant and equipment, goodwill and other intangible assets *(2021: Impairment loss of property, plant and equipment and right-of-use assets)*	290.0	0.1	8,645.1	1.3	10,727.0	2.0
Management benefit expenses	321.0	0.1	478.9	0.1	574.4	0.1
Net foreign exchange loss	297.2	0.1	-	-	466.5	0.1
Total expenses	**431,058.5**	**92.1**	**615,861.3**	**93.8**	**545,976.2**	**100.8**
Profit from operating activities	**41,798.8**	**8.9**	**49,716.7**	**7.6**	**573.0**	**0.1**
Finance income	215.7	0.0	946.8	0.1	1,182.6	0.2
Finance costs	(7,120.7)	(1.5)	(10,495.2)	(1.6)	(15,367.2)	(2.8)
Reversal of expected credit loss *(expected credit loss), net (2021: Impairment loss determined in accordance with TFRS 9, net)*	(97.1)	(0.0)	(41.6)	(0.0)	6.2	0.0
Share of net profit (loss) of associate and joint ventures accounted for using equity method *(2021: Share of net profit of joint ventures accounted for using equity method)*	160.2	0.0	(22.8)	(0.0)	8.3	0.0

Unit: Baht million	For the year ended December 31					
	2021	%	2022	%	2023	%
Profit (loss) before tax expense (income)	**34,957.0**	**7.5**	**40,103.9**	**6.1**	**(13,597.2)**	**(2.5)**
Tax expense (income)	6,703.3	1.4	5,773.7	0.9	(2,683.8)	(0.5)
Profit (loss) for the year	**28,253.7**	**6.0**	**34,330.2**	**5.2**	**(10,913.3)**	**(2.0)**
Profit (loss) attributable to:						
Owners of the Company *(2021: Owners of the parent)*	26,288.0	5.6	31,006.1	4.7	(10,797.9)	(2.0)
Non-controlling interests	1,965.7	0.4	3,324.1	0.5	(115.4)	(0.0)
	28,253.7	6.0	34,330.2	5.2	(10,913.3)	(2.0)
Earnings (loss) per share						
Basic and diluted earnings (loss) per share *(2021: Basic earnings per share) (in Baht)*	4.55		5.39		(2.06)	
Core earnings per share (in Baht)*	**3.76**		**6.02**		**0.28**	

* Core financials are calculated as reported financials less Inventory gain/loss and less extraordinary items, if any to reflect operations before any extraordinary items.

Statement of Cash Flows (Consolidated Financial Statements)

Unit: Baht million	For the year ended December 31		
	2021	2022	2023
Cash flows from operating activities			
Profit (loss) for the year	28,253.7	34,330.2	(10,913.3)
Adjustments to reconcile profit (loss) to cash receipts (payments)			
Tax expense (income)	6,703.3	5,773.7	(2,683.8)
Finance costs	7,120.7	10,495.2	15,367.2
Depreciation	18,633.8	22,893.3	24,834.6
(Reversal of) expected credit loss, net *(2021: Impairment loss (reversal of impairment loss) determined in accordance with TFRS 9, net)*	97.1	41.6	(6.2)
Amortization of intangible assets and other assets	3,102.9	2,828.1	2,862.7
Employee benefits expense related to defined benefit plans	926.4	950.6	818.2
Foreign exchange (gain) loss, net *(2021 and 2022: Unrealised foreign exchange (gain) loss, net)*	(789.0)	1,042.5	681.3
Unrealized (gain) loss on fair value adjustment of derivatives, net	(24.9)	(152.2)	497.3
Share of net (profit) loss of associate and joint ventures accounted for using equity method *(2021: Share of net profit of joint ventures accounted for using equity method, net of tax and 2022: Share of net (profit) loss of associate and joint ventures accounted for using equity method, net of tax)*	(160.2)	22.8	(8.3)
Impairment loss of property, plant and equipment, goodwill and other intangible assets *(2021: Impairment loss on property, plant and equipment and right-of-use assets)*	290.0	8,645.1	10,727.0
Provision for (reversal of) losses on inventories devaluation, net	238.1	2,098.5	(102.4)
(Gain) loss on disposal of property, plant and equipment, net *(2021 and 2022: (Gain) loss on disposal/written-off of property, plant and equipment, net)*	142.4	(120.7)	113.5
Finance income	(215.7)	(946.8)	(1,182.6)
	64,309.5	**87,901.9**	**41,005.1**
Changes in operating assets and liabilities			
Trade accounts receivable	(19,559.4)	5,971.2	3,773.9
Inventories	(35,706.2)	(15,779.6)	19,266.8
Other current assets	(5,464.8)	321.0	2,014.6

Unit: Baht million	For the year ended December 31		
	2021	2022	2023
Other non-current assets	(853.7)	1,176.3	805.3
Trade accounts payable	31,260.4	6,731.3	(5,772.1)
Repayment of employee benefits expense related to defined benefit plans *(2021 and 2022: Repayment of employee benefit related to defined benefit plans)*	(753.0)	(643.0)	(877.3)
Other current liabilities	3,006.5	1,708.7	(2,023.7)
Other non-current liabilities	53.7	(498.1)	656.5
Net cash generated from (used in) operating	**36,293.0**	**86,889.6**	**58,849.1**
Taxes paid	(2,521.2)	(8,908.5)	(5,715.4)
Net cash from operating activities	33,771.9	77,981.1	53,133.7
Cash flows from investing activities			
Net cash outflow on acquisitions of businesses	(2,363.1)	(46,232.9)	(68.0)
Cash outflow on payment of payable for acquiring joint operation	(151.5)	(288.7)	-
Cash outflow on additional investment in joint ventures	(216.6)	(188.0)	(99.2)
Cash outflow on acquisition of non-controlling interest	(624.3)	-	-
(Acquisition of) proceeds from sale of other investments *(2021: Proceeds from sale (purchase) of other investments)*	193.2	(507.9)	(573.2)
Proceeds from sale of property, plant and equipment and capital expenditure prepayment *(2021 and 2022: Proceeds from sale of property, plant and equipment)*	330.5	558.6	107.0
Acquisition of property, plant and equipment and capital expenditure prepayment *(2021: Acquisition of property, plant and equipment)*	(19,959.1)	(25,631.3)	(24,009.3)
Proceeds from sale of intangible assets	15.6	90.1	65.9
Acquisition of intangible assets	(3,239.2)	(2,929.6)	(2,220.6)
Proceeds from (paid for) loans to joint ventures, net	(61.3)	6.6	(438.1)
Cash received from forward contracts and cross currency swaps	-	-	389.0
Dividend received from joint ventures	27.2	20.0	14.4
Finance income received	220.1	945.1	1,178.9
Net cash used in investing activities	**(25,828.4)**	**(74,158.3)**	**(25,653.2)**
Cash flows from financing activities			
Proceeds from bank overdrafts and loans with non-related parties *(2021: Proceeds from short and long-term loans from financial institutions)*	330,010.4	409,070.0	634,413.6
Repayment of bank overdrafts and loans with non-related parties *(2021: Repayment of short and long-term loans from financial institutions)*	(327,626.6)	(389,332.2)	(641,382.9)
Proceeds from debentures, net of deferred issuance cost of de-benture *(2021 and 2022: Proceeds from debentures, net of debenture issuance costs)*	9,980.8	11,980.4	9,982.0
Repayment of debentures	(7,705.8)	(7,756.4)	(5,277.6)
Payment of lease liabilities	(2,304.9)	(2,899.1)	(3,695.3)
Dividends paid to owners of the Company	(5,193.3)	(8,140.9)	(6,456.5)
Dividends paid to non-controlling interests	(410.9)	(541.1)	(712.5)
Finance costs paid	(6,787.3)	(9,731.5)	(14,714.9)
Deferred financing cost paid	(45.3)	(383.3)	(315.4)
Coupon payment on subordinated perpetual debentures	(750.0)	(750.0)	(750.0)
Net cash from (used in) financing activities	**(10,832.9)**	**1,515.9**	**(28,909.5)**
Net increase (decrease) in cash and cash equivalents, before effect of exchange rates changes	**(2,889.5)**	**5,338.7**	**(1,429.0)**
Effect of exchange rate changes on cash and cash equivalents	156.2	(342.8)	(1,099.5)

Unit: Baht million	For the year ended December 31		
	2021	2022	2023
Net increase (decrease) in cash and cash equivalents	**(2,733.3)**	**4,995.9**	**(2,528.5)**
Cash and cash equivalents at 1 January	18,948.5	16,215.3	21,211.1
Cash and cash equivalents at 31 December	**16,215.3**	**21,211.1**	**18,682.6**

Key Financial Ratio

		For the year ended December 31		
		2021	2022	2023
Liquidity Ratio				
Current ratio	times	1.1	1.1	0.9
Quick ratio	times	0.4	0.4	0.4
Cash from operating ratio	times	0.2	0.4	0.3
Receivable turnover ratio	times	10.7	11.9	10.0
Collection days	days	33.8	30.2	36.0
Inventory turnover ratio	times	5.3	5.2	4.4
Average number of days sales	days	68.1	69.1	82.5
Account payable turnover ratio	times	5.2	5.5	4.6
Payment days	days	69.8	65.3	78.9
Cash cycle	days	32.1	34.0	39.6
Profitability Ratio				
Gross profit margin	%	18.2	17.1	12.1
Operating profit margin	%	8.0	7.5	1.2
Non-operating profit margin	%	0.9	1.4	0.8
Net profit margin	%	5.6	4.7	(2.0)
Return of equity (ROE)	%	18.4	18.0	(6.2)
Efficiency Ratio				
Return on asset (ROA)	%	5.7	5.9	(1.8)
Return on fixed asset	%	16.9	18.7	4.4
Asset turnover	times	1.0	1.1	0.9
Financial Policy Ratio				
Interest bearing debt to equity	times	1.3	1.3	1.4
Net interest bearing debt to equity	times	1.2	1.2	1.3
Interest coverage ratio (on EBITDA)	times	8.9	8.0	2.5

Message from the Chairman

Mr. Sri Prakash Lohia

Dear Stakeholders,

Volatility is not new to us at Indorama Ventures. In fact, embracing change is a core attribute that we have actively leveraged to our advantage for over three decades, always coming out ahead in the end. Effective stewardship is fundamental to this, and in this regard, Indorama Ventures is very well served by the Group CEO, his able management team, and supported by an experienced Board of Directors. At our annual General Management Meeting in January this year, I was deeply impressed by our leadership teams' ability to fathom the fundamental changes in our industry's landscape and chart a fresh course with optimism and confidence.

I thank them all for an inspiring year during which they not only confronted profuse headwinds but also applied their deep experience to craft IVL 2.0 – an evolutionary step-change in our business strategy, designed to position our company's unique advantages in a new era of opportunity. Under the plan, we will navigate the current downturn to restore earnings to previous peaks and drive enhanced shareholder returns over three years. In the longer term – a period in which we expect borrowing costs to remain high – our business will benefit from a deleveraged capital structure, an optimized asset footprint, and a raft of transformative digital tools that will enable our managers to respond to market changes more effectively.

Recognition for our sustainability and corporate governance

Recycled PET is the best packaging solution for closing the loop and creating a circular economy. Therefore, in 2023, it was deeply satisfying for our company to accomplish an extraordinary milestone in recycling its one hundred billionth bottle since we began our recycling operations more than a decade ago. I congratulate all our teams involved in this momentous achievement. We continue to receive plaudits and recognition for our many sustainability initiatives, including being recognized by EcoVadis for the sixth consecutive year. We also continue to be included in the Dow Jones Sustainability Indices.

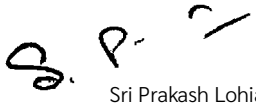
Our best-practice boardroom ethics and corporate governance policies are continually recognized. During the year, we were awarded an "Excellent 5 Star" score by the Thai Institute of Directors in conjunction with the Stock Exchange of Thailand and Security Exchange Commission of Thailand for the eleventh consecutive year. In a rigorous review of 782 companies, we were recognized as one of the top 5 performers.

To ensure continued alignment with the highest governance standards, the Board approved changes to our Corporate Governance Manual, specifically to the Anti-Corruption Policy, Intellectual Policy, Human Rights Policy, and Whistleblower Policy, which was followed up with a global employee awareness and training campaign.

Extending our appreciation

In 2024, we will bid farewell to Mr. Russell Kekuewa, who completes his term as Independent Director. Rusty served our board with distinction as Chairman of the Nomination, Compensation and Corporate Governance Committee and as Member of the Sustainability and Risk Management Committee. On behalf of my Board, I thank him for his service. A new Director will be announced in due course.

In closing, I would like to acknowledge our company's management team for their bold stewardship through this tumultuous period. As always, I remain grateful to my fellow Directors for their support. I also thank all our employees and encourage them to embrace the challenges and opportunities that change always brings as we embark on a new era under IVL 2.0.



Sri Prakash Lohia
Chairman

Message from the Group Chief Executive Officer

Mr. Aloke Lohia

Dear Stakeholders,

When 2023 began – following a year in which we recorded a record financial performance – it was already plain that the 12 months ahead of us were going to be more challenging. As interest rates soared, coupled with China's faltering economy, prolonging the volatility in global chemical markets, we began to ask whether the deepening disruptions signaled something more profound than the normal ebbs and flows of our business cycle. As I look back, some 15 months later, it certainly wasn't evident to me then that 2023 would turn out to be a defining chapter in Indorama Ventures' storied history.

Once it became clear that we were facing an unusual situation, we applied our deep industry knowledge to understand the new dynamic. By mid-year, we held a firm conviction that we were confronting a far-reaching shift in our industry, with profound implications for longstanding structures in global chemical markets. We recognized that what worked for us in the past will not work going forward, and we had to evolve our strategy. In the second half, we chalked up a new plan to operate successfully within the new ground rules, one which leveraged the unique integrated global model we have built over three decades. Our IVL 2.0 plan is a step-change evolution in our business strategy, heralding a new long-term phase of sustainable growth for our company.

As I write, a few days after unveiling IVL 2.0 at our annual Capital Markets Day, it is with enormous satisfaction that I look back on 2023 as a truly decisive pivot, one of perhaps three or four momentous inflection points of the last 30 years. Yes, it was painful as our earnings slid from the peaks of 2021 and 2022 amid a raft of unprecedented industry headwinds; but it was also an inspirational period when, once again, we turned to on our innate "founder's instincts" to embrace change and unearth fresh opportunities to grow.

A new phase of sustainable growth

It is worth exploring in more detail the extraordinary shifts in our industry that I believe will propel Indorama Ventures' next phase of growth as an international chemical leader. Over the past 18 months, a rare set of circumstances converged in global chemical markets, characterized by geopolitical tension, high inflation and interest rates, and sluggish economic growth. In China, which is investing heavily in local capacity to support its ambition as a dominant political and economic power, a subdued economy is continuing to drive oversupply and fuel cheap exports. In North America, competitive feedstock prices are adding to global capacity. At the same time, macroeconomic and geopolitical disruptions, including the war in Ukraine and later in the Middle East, triggered unprecedented volatility, including an extended period of customer destocking, normalizing freight rates, increased capacity and

hence imports from Asia, and feedstock pricing disparities between regions due to gasoline disparity. This affected our volumes and margins through 2023 and led to a 53% decline in EBITDA to $1.12 billion. I am confident that our volumes will recover steadily over the next three years as we move through the business cycle, as shown by end-consumer demand growth seen in the FMCG industry's reporting.

However, there is a more fundamental, structural industry dynamic at play, which I believe presents a generational opportunity for Indorama Ventures to secure a long-term path of sustainable growth. In the next few years, as Western markets draw closer to peak oil demand, refineries will rebalance and propel feedstock prices higher. This will reduce our competitiveness, especially in Europe. The reverse is true in developing Asian markets, where peak oil demand is still decades away, and feedstock costs will continue to push lower as capacity rises. As a global industry leader with a unique integrated manufacturing model, these mega-trends play into our hands. Indorama Ventures has the inherent flexibility and global footprint to pivot towards lower feedstock prices through agile 'make or buy' strategies that reduce our working capital and interest costs. Furthermore, we will also increasingly benefit from our accelerated investments in transformative data management tools and intelligent dashboards that will allow our experienced managers to predict market changes and respond to shifts in real time.

In this environment, our unmatched model has unique advantages, even as Chinese capacity and exports continue to rise. First, we are the only virtual shale gas-based PET manufacturer, which gives us a natural hedge against prices of crude oil-based feedstock in the U.S. Second, we are the biggest recycler of PET, with ground-breaking investments in advanced recycling innovation. This means our customers can trust us as a one-stop shop to help them meet their sustainability targets, especially in Western markets. Finally, our people are a critical advantage, proven during the global pandemic as our three decades of expertise and deep customer relationships was a factor in fueling us to record performances in 2021 and 2022.

'Internationalizing' Indorama Ventures

IVL 2.0 is more than just a three-year roadmap to help us navigate the current downturn and restore our earnings to previous peaks by 2026. It is an evolution in our long-term business strategy to 'internationalize' our global business and position our unique advantages for the new circumstances that I described above. By 'internationalize' I mean evolving from our former acquisition-led pioneering mindset to a more conservative business setting that will attract an international investment rating as a large multinational company.

In 2023, we capped a remarkable era of entrepreneurship in which we made some 50 acquisitions over 20 years to build our unmatched global footprint and market leadership. Now, having achieved scale, we have a momentous opportunity in front of us – a rare set of industry circumstances – to leverage our model to enhance our earnings and create long-term value for shareholders. To achieve this in an environment of higher interest rates, we will deleverage our financial structure, optimize our asset footprint, and focus on improved cash flow to emerge stronger with first-quartile costs and lower interest expenses.

Specific measures include a $2.5 billion reduction in Net Debt to around $4.3 billion in 2026, including generating $0.8 billion in cashflow from operational improvements and a further $1.7 billion from strategic corporate actions including divestments, asset actions, and select business listings. These steps are aimed at reducing our Debt to EBITDA ratio to less than 3x, which will give our business leaders more flexibility to focus on their new priorities based on strict capital discipline and international standards of leverage.

Four strategic pillars underpin our transformation plan. First, our asset optimization program will lift our operating rate from 74% to 89%, including moving to lower-cost facilities and optimizing our manufacturing capacity. Second, the launch of Project Olympus 2.0, our efficiencies program, will build on the success of Olympus 1.0 to unlock a further $450 million run rate gains by 2026. Third, the sale of non-core assets and other value-unlocking strategies will generate about $1.3 billion in cash proceeds to pay down debt. Finally, our DNA in cost excellence will drive a $350 million per year value uplift. To this end, in 2023 we merged our recycling and iPET operations to ensure a more seamless 'one stop' service to our customers.

It is important to emphasize that we are not abandoning our traditional growth mindset. This inherent instinct will always be a constant at Indorama Ventures. I am as optimistic as ever about the growth potential of our company, even as our focus now is on organic expansion under a more disciplined capital structure. Today, we have unparalleled leadership positions in all our diverse, growing, and sustainable markets. Most of our business is tied to macro-consumer trends as populations expand and modernize and demand more sustainable daily necessities that improve their lives and the environment.

People, Platforms, Processes

Much of our transformation as a 'future-ready' organization has in fact been underway since 2021, and continued apace in 2023 even as we managed the operational challenges. I would like to highlight a few key achievements and initiatives, all of which are steppingstones towards internationalizing our company.

Earlier, I highlighted our people as one of our unique advantages. As part of our plan to build a 'next gen' of leaders with an agile growth mindset, in 2023 we identified a younger generation of talent through our Future Leaders Program. A personal highlight of mine in 2023 was hosting our most promising young managers from all over the world to an immersive learning experience at our head office in Bangkok.

In the first quarter of 2024, I congratulated our SAP S/4HANA team as they successfully implemented our flagship ERP enterprise platform across our business. This is a momentous achievement and a major advance in our

digitalization program. Earlier, I mentioned some examples of the digital tools we are rolling out to help us make more agile, data-led business decisions. Some of the new AI tools were inspired by our 'Digital Trek' in 2023, in which key executives visited Microsoft's innovation center in Seattle – another personal highlight. Our six Enabling Functions are now operational, and the next phase is to embed them into our business. I congratulate our Integrated Oxides and Derivatives (IOD) segment on their new name 'Indovinya' as management focuses its Downstream portfolio under a more streamlined, independent structure ahead of a planned future listing.

Final thoughts

In January this year, I was immensely gratified to watch our leadership group apply our newly adopted VUCA (Vision, Understanding, Clarity, Action) mindset at our annual Global Management Conference in Bangkok. As our 'next gen' of leaders, they are the ones who must now execute IVL 2.0 as increasingly empowered businesses under a more devolved, decentralized, and independent structure. Succession planning has been one of my personal priorities for some time, and it is enormously satisfying to see the results in action.

In closing, I would like to thank our Board, our leadership team, and all our employees for your unstinting energy through a difficult and challenging year. I started by pointing out that 2023 was a momentous period in our history. I believe that in a few years' time we will look back and remember it, not only for the difficult hurdles that impeded our financial performance, but for the decisive strategic 'pivot' that will come to define this next phase in Indorama Ventures' growth story. As rare as these critical moments are, they are not new to us. In the last 25 years, we have experienced three existential events, starting in 1997 with the 'Tom Yam Kung' financial crisis in Southeast Asia, the Great Financial Crisis (GFC) of 2008, and the current global recession due to wars in Europe and the Middle East, compounded by soaring interest rates. It is our unmatched industry expertise, our longevity, and our agility as a family business that gives us our innate ability to embrace adversity and turn it to our advantage. I am confident that we made the right calls in 2023 and I look forward to the results with a renewed sense of optimism and genuine excitement.

Aloke Lohia
Group Chief Executive Officer

Message from the Deputy Group CEO and Group CFO

Mr. Dilip Kumar Agarwal

Dear Stakeholders,

At the beginning of 2023, I was justifiably proud of our teams around the world as we signed off on a record FY22 performance following the two-year pandemic. A year later, as the winds of change disrupt our industry once again, I am every bit as grateful to them as they applied their energy and expertise in 2023 to shore up our defenses and maintain the same high level of unbroken service to our customers.

Even as our earnings slid from the peaks of the previous two years, our unstinting efforts to enhance our competitiveness, conserve cash and reduce costs helped us through a prolonged period of unprecedented macroeconomic and geopolitical challenges, including industry-wide customer de-stocking and new supply in the U.S and China, among other substantial headwinds. As these deepened through 2023, we came to understand that they signaled a more fundamental long-term shift that is re-forging our industry globally. By the end of the year, our leadership teams had a clear view of the actions necessary to navigate the changed business landscape, and had drawn their plans to secure Indorama Ventures' sustainable growth path for the next three years and beyond.

In the second half of 2023, this intense period of analysis and introspection culminated in our new IVL2.0 transformation strategy as a significant evolution in our long-term business strategy. We reviewed the plan as a leadership team at our annual Global Management Conference in Bangkok in January 2024 and unveiled it at our Capital Markets Day in March. We did so, not with a sense of trepidation, but with a gratifying confidence and optimism that is built on three decades of experience in navigating similar seismic shifts in our industry. As always, we embraced change as an opportunity to leverage our unique global model and leadership positions in all our markets.

2023 Performance Review

Full-year EBITDA in 2023 declined 53% from the previous year's peak to $1.12 billion as our margins and volumes were impacted by the unprecedent industry-wide volatility. Net Profit After Tax decreased 135% to a loss of $310 million on a 17% slide in revenue to $15.6 billion as volumes dropped 4% on a year-on-year basis. Net Operating Debt to Equity rose 18 basis points to 1.13 times. The company's Board approved a full-year dividend of 0.925 Baht per share on Core Earnings Per Share of 0.28 Baht.

The decline in earnings was triggered by a challenging macroeconomy, characterized by geopolitical tension in Ukraine and later in the Middle East, an extended period of unprecedented customer destocking, higher inflation and interest rates, and sluggish global economic growth. New capacity in China and the U.S, coupled with increased imports from Asia, weighed on our higher-cost operations in Western markets, especially in Europe.

To counter these headwinds, throughout the year we leveraged our deep industry relationships and our integrated model to ensure uninterrupted service to our customers. We also undertook stringent steps to generate cost savings, improve cash flow, and drive competitiveness, resulting in operating cash flow of $1.5 billion in 2023 – a conversion rate of 136%. Capex plans were also reduced significantly. I am immensely proud of these achievements, which again showed how quickly and effectively we can respond to fluctuations.

Our ability to adapt to fluctuations comes from an inherent cost focus that has been embedded throughout our organization ever since we were founded more than three decades ago. Project Olympus 1.0, our successful efficiencies and savings program, was built on this same disciplined approach to continuous cost and commercial innovation. Its successor, Olympus 2.0, will continue to be a crucial impetus for remaining in the first quartile cost position.

This vigilant mindset applies no less to our corporate finance team, who prudently managed the company's exposure amid rising interest rates and lower earnings throughout the year. Having assessed the situation, they worked closely with our business leaders to scan portfolios for returns above our cost of capital to ensure the assets generate economic value for the company.

Looking forward, as we expect the environment of higher interest rates to continue, we have a dependable track record of keeping our leverage below the threshold level, and our repayment obligations are well spread out over the next five years. Furthermore, Indorama Ventures' credit rating was maintained by TRIS, while our portfolio of sustainability-linked financing is growing.

Business Segments

Combined PET (CPET)

Our CPET segment reported EBITDA of $553 million in 2023, a decline of 61%. Volume dropped 6% as the heavy destocking trend that began late in 2022 carried over into 2023. A combination of subdued demand and import pressures in the EMEA region also weighed on the result, while margins were compressed by new capacity in China and lower freight prices. In Western markets, feedstock costs increased due to regional disparity in aromatics prices.

Despite these hurdles, we continued our strategic expansion of our PET recycling operations, adding more capacity in Indonesia and Brazil during the year, bolstered by full-year contributions from our plants in the Philippines and France. The importance of recycling to our earnings growth will continue to increase as we help our customers to fulfil their sustainability commitments, particularly in mature markets. We have merged our Recycling business into our Integrated PET operations to ensure a seamless one-stop solution for both recycled and virgin products for customers.

As part of our asset optimization program, in the fourth quarter we announced a pause in the partly completed PTA-PET joined venture plant at Corpus Christi, Texas, and consequently recorded a $308 million non-cash impairment. The project is on hold while the partners assess its future amid rising costs, labor shortages, and a reduced market value.

Integrated Oxides and Derivatives (IOD)

The IOD segment, now renamed Indovinya, delivered an EBITDA of $440 million, a decline of 41%. The Intermediates portfolio had another superb year amid higher crude oil prices and lower feedstock costs. This portfolio is well-suited to Indorama Ventures' integrated model given its natural hedge to our CPET segment. At our Capital Markets Day in March 2024, we announced our plan to move the Intermediates assets to CPET, bolstering our PET business's integrated offering.

IOD's Downstream business, including High Vale Add surfactants, was affected by destocking and imports from China. However, the fundamentals are strong with Brazil having one of the largest agricultural footprints in the world.

Fibers

The Fibers segment posted an EBITDA of $107 million, a 54% drop, as the post-pandemic recessionary environment continued to impact demand. Our Fibers customer base is shared across three verticals: Hygiene, Lifestyle, and Mobility. Each vertical is connected by a common raw material, with polyester making up most of the feedstock, providing us with a cushion on overall earnings. We are simplifying and centralizing this business segment to drive enhanced performance.

Outlook

We expect the industry headwinds to continue through 2024, albeit with some improvement in volume as the destocking trend normalizes and interest rates come off their peaks. As I write, the current benchmark integrated PET spread is not sustainable and should gradually recover. New anti-dumping measures, including in the European Union, Mexico, India, will also help us as most of our operations are situated outside China. We will continue to review our capital allocation to conserve cash and lower our fixed costs, building on the significant steps we undertook in 2023. In 2024, we are ready to implement IVL2.0, a transformational change in strategic direction to respond to the deep long-term structural changes in our industry that became increasingly clear over the last 12-18 months.

IVL 2.0

Today, Indorama Ventures has an unparalleled global integrated platform, with leadership in sustainable and growing markets. To respond to the profound changes in our industry settings, our focus over the next three years is on deleveraging our financial structure and continually improving the quality of our earnings by optimizing and streamlining our assets, our processes, and our organization.

We are not starting from scratch. Since 2021, we have achieved substantial success in our transformation programs, including the completion of Project Olympus 1.0, the implementation of SAP S/4HANA, establishing our six Enabling Functions, and identifying a next generation of talented leaders as part of our succession plan.

But there is more to be done in the next three years. Under IVL2.0, we will substantially deleverage our business and switch from our earlier entrepreneurial setting to one of value creation, with a focus on enhancing Earnings Per Share (EPS). Over the next three years, some $2.5 billion of free cash flow will reduce net debt from the current level of $6.8 billion to around $4.3 billion.

Four strategic pillars will drive our transformation. These include optimizing our global asset footprint to increase our operating rate and launching Project Olympus 2.0 to build on the success of the first variant to unlock a further $450 million in savings per year. We also aim to generate cash proceeds from the sale of non-core assets and through select business listings. Finally, we are leveraging our leadership in sustainability innovation and our core growth markets to drive value uplift.

The scope of IVL2.0 is far-reaching across all our enterprises. Key projects include preparing the PET Packaging and IOD Downstream businesses for separate listings and focusing on more circular products that help our customers to meet their sustainability commitments, such as supporting partners that specialize in advanced recycling and bio-based feedstock technologies.

Acknowledgements

I am continually impressed by our leadership team's ability to confront enormous change with honesty and confidence. As we face another seismic shift in our business environment, I am encouraged by their unstinting energy, enthusiasm, and positivity to ensure Indorama Ventures continues to grow sustainably. As a company, we truly do embrace change as a core value!

In reviewing our three-year business plan to 2026, I remain as optimistic as ever about Indorama Ventures' long-term growth. This latest round of industry upheaval arrived just as we capped 2022 with a record performance following a remarkable era of entrepreneurship in which we pioneered an unassailable global footprint and market leadership – making some 50 acquisitions over 20 years. Now is the right time to take stock of our market position and embark on a new chapter of sustainable value creation.

On behalf of the Indorama Management Council (IMC) I thank all our leaders and employees for their tireless efforts. I also acknowledge our shareholders, lenders, suppliers, and customers for their continued support. Let's go forward in confidence and with optimism.

Dilip Kumar Agarwal
Deputy Group CEO and Group Chief Financial Officer

Message from the Chairman of the ESG Council

Mr. Yashovardhan Lohia

Dear Stakeholders,

In 2023 we achieved a truly magnificent milestone in recycling our 100 billionth PET bottle. This was made possible by a carefully executed strategy together with our suppliers and customers, starting from humble beginnings in 2011 to the 20 recycling sites we have around the world today. I congratulate all our dedicated employees who worked tirelessly for more than a decade to achieve this remarkable feat. It is a manifest example of Indorama Ventures' purpose in action: "Reimagining chemistry together to create a better world".

The future for PET recycling looks bright as customers, governments, and communities increasingly recognize it as the best solution for improving the management of waste and reducing carbon emissions. In 2023, the governments of Thailand and India approved the use of recycled PET in food packaging products, opening a major opportunity for recycling to 'close the loop' towards a fully circular economy in those markets. In more mature markets, consumer demand for more sustainable products is growing apace, supporting recycling as one of the most important growth drivers of our core PET business.

To optimize our operations, we have merged our Recycling business into our Integrated PET segment. This fulfils our customers' need for a one-stop solution for both recycled and virgin products, and enables a more seamless commercial relationship, particularly in Western countries where growth is increasingly led by rising demand for recycled content.

We will continue to invest in recycling's future as a key pillar of our broader ESG program as well as our ambitions for sustainable profit growth. PET is the material of choice for many packaging applications, and growing demand for recycled resins will be met by both traditional mechanical methods and more modern innovation in advanced chemical recycling. We are working with packaging companies to innovate new PET products that help our customers meet their sustainability commitments, including recycled content targets. We have also engaged partners that specialize in enhanced recycling technologies, supporting them as they work towards the production and commercialization phases. Our relationship with a leading bio-recycling technology company is steadily building what will be the world's first industrial-scale enzymatic PET recycling plant in France. To celebrate International Wine Day, we collaborated with a packaging technology specialist to bring the world's first sustainable, monolayer PET sparkling wine bottle to market. Our Integrated Oxides and Derivatives (IOD) segment recently made its first green ethylene oxide-based surfactant sale to Asia from our operations in Brazil.

These commitments will continue under Indorama Ventures' new IVL2.0 strategy, albeit more selectively and under stricter criteria against our new priorities in 2024 to deleverage our balance sheet and optimize our operations to improve earnings quality. Under IVL2.0 we will continue to transform our operations and our product portfolio to meet our customers' evolving sustainability needs. We will also invest in partnerships and start-up businesses with innovative technologies in recycling, decarbonization, green chemistry, and bio-based and circular raw materials. Under this program, we will select only unique technologies with superior market propositions. We will also support third parties investing in new technologies that have a clear path towards commercialization, and continue to secure enhanced recycling and biomass feedstock through long-term offtake agreements with dependable companies. Our investments in sustainability must protect current business value as well as enhance our future earnings.

During the year, Indorama Ventures proudly joined 'Together for Sustainability', a global program in which we are helping our suppliers to identify risks and opportunities along the value chain and implement more sustainable practices. EcoVadis recognized this initiative, and our many other sustainability commitments, for the sixth consecutive year, with an improved score. Indorama Ventures has also been selected for inclusion in the Dow Jones Sustainability World Index (DJSI World) for the fifth consecutive year and the Dow Jones Sustainability Emerging Markets Index (DJSI Emerging Markets) for the seventh year in a row.

On the broader ESG front, our various site teams around the world are actively involved in education, skills-building programs, and healthcare initiatives to realize shared values between our communities and our sites. Notably, I congratulate our team at Port Neches, Texas, who raised a truly remarkable sum during the year in their annual social outreach program. We continually strive to build close ties and shared values with our surrounding communities at all our locations.

The work our teams achieved in 2023 will continue to drive sustainability outcomes well into this year and beyond. These include expanding our new Sustainability Academy, which we launched in 2023. I am continually inspired and encouraged by our work. Once again, the past year has demonstrated the positive impact we have in fulfilling our three core ESG objectives as a purposeful enterprise – building responsible operations, empowering our people, and promoting ethical economic prosperity.

Yashovardhan Lohia
Chairman of the ESG Council

Business Operations

Strategy and overview of business operations

Group strategy

Indorama Ventures Public Company Limited, listed in Thailand, is a global sustainable chemicals producer with predominant applications in health, personal hygiene, human safety, and packaging solutions, with a global manufacturing footprint across Asia-Pacific, Europe, the Americas, and Africa. Our portfolio comprises Combined PET, Integrated Oxides and Derivatives (IOD) and Fibers. Indorama Ventures' products serve major FMCG and automotive sectors, i.e., beverages, hygiene, personal care, tires, and safety segments. We have over 26,000 employees worldwide and consolidated revenue of $15.6 billion in 2023.

We have broadened our vision toward 2030 in February 2022 with a new purpose statement: "Reimagining chemistry together to create a better world."

Vision 2030 represents the significant progression of our continued journey toward net zero, centered on three pillars: Decarbonization of our Operations, Innovative and Sustainable Products, and being a Future-ready Organization.

- Decarbonization of our Operations
- Innovative and Sustainable Products
- A Future-ready Organization

Portfolio Evolution

Today, Indorama Ventures has a platform of businesses that is relatively (compared to other chemical peers) less susceptible to volatile macroeconomic conditions due to three key differentiating factors:

1. Geographical diversity

With manufacturing locations in 35 countries, evenly distributed across three regions, Indorama Ventures' widespread presence provides natural mitigation to the increasingly volatile geopolitical landscape. Moreover, with the recent global disruptions, the company's ability to provide shorter supply chains and serve from multiple locations brings trust and reliability to our customers.

2. Multiple earning streams

With three strong business segments and 10 business verticals, Indorama Ventures' combined portfolio acts as a meaningful hedge to disruptions in one area at any given time. The whole is stronger than its parts. As we build an increasingly balanced portfolio, the organization is creating further opportunities for growth, especially in the downstream portfolio in areas such as home and personal care, and food packaging.

3. Attractive end markets

Over 70% of Indorama Ventures' products serve consumer daily necessities in applications such as food and beverage packaging, home and personal care, and crop solutions. Not only are these end markets relatively demand inelastic, but they also have attractive growth rates catering to increasingly favorable consumer needs, such as safety and hygiene.

In addition to the evolution of our platform, we continue to enhance our systems to strengthen and future-proof the organization. This includes investments in SAP S/4HANA, an integrated central ERP platform, continual productivity improvements through Project Olympus, and corporate functions to support our business leaders in navigating the challenges of the future.

Changes and important developments

Company overview

Formerly known as Beacon Global Limited, the Company was established on 21 February 2003, and renamed Indorama Ventures Public Company Limited on 19 March 2009. Indorama Ventures Public Company Limited is a holding company with investments in companies operating in the intermediate petrochemicals industry in Thailand and globally.

Company background

We commenced business operations in 1994 with the incorporation of Indorama Holdings Ltd., which was the first worsted wool yarn producer in Thailand.

Entry into the Combined PET business

This segment includes businesses in the Aromatics and PET value chain, including PX, PIA, NDC, PTA, PET resins, and PET packaging. This segment will also include Indorama Ventures' recycling initiatives across the polyester value chain. In 1995, we entered the petrochemical industry, focusing on the polyester value chain business with the establishment of a PET resin facility in Thailand. By the end of 2022, we were the largest PET resin producer with around 18% global market share. We are also the largest PET to PET recycler globally. In various regions where we operate, Indorama Ventures commands #1 to #2 positions.

In 2022, we completed the acquisition of a packaging business in Vietnam, Ngoc Nghia Industry-Service-Trading Joint Stock Company (NN). NN is a leading PET converter in Vietnam, with manufacturing presence in both the North and South of Vietnam.

Entry into the Integrated Oxides and Derivatives business (IOD)

We entered this segment by acquiring an MEG and PEO facility in the state of Texas in 2012.

In 2015, we acquired an ethylene production facility, located in Westlake, Louisiana, which is now called Indorama Ventures Olefins (IVOL).

In January 2020, we completed our acquisition of IVOX, investing in the Integrated EO and PO derivatives business, which is fully integrated downstream in surfactants (used in personal and home care) and in propylene oxides (used in insulation and foam materials).

In April 2022, we completed the acquisition of Oxiteno, a leading integrated surfactants producer, catering to highly attractive end-use markets in LATAM. This acquisition gives us a unique portfolio in high-value surfactants and significantly extends our existing IOD business. The acquisition includes 11 manufacturing plants in Latin America and USA, five R&D centers, an experienced management team, a strong environmental governance record, and expertise in green chemistry innovation.

Entry into the Fibers business

This segment includes all our offerings in the mobility (automotive and tires), personal hygiene, and lifestyle domains. Growth in the Fibers business comes as a result of trends toward lightweighting, use of sustainable materials, increasing attention being paid to personal hygiene, and changes in the choice of personal wear, especially by the younger generation. Our Fibers business comprises three separate verticals – Mobility fibers, Hygiene fibers, and Lifestyle fibers - and have business heads to improve and grow the verticals. Indorama Ventures has leadership positions regionally in these verticals and ranks #1 to #3 in the geography where we operate.

In 2022, we completed the acquisition of the corporate capital of Filatura Tollegno 1900 S.r.l., an Italian company located in Tollegno (Italy), active in the yarn dyeing business in Italy, and the spinning and top dyeing operation in Poland. This acquisition is a strategic fit for Indorama Ventures' unique integrated business platform and will make a significant contribution to the sustainable growth of the Wool business.

Extraordinary actions

In 2022, Indorama Ventures impaired a few assets in Europe (Fibers) and one PTA asset in CPET in Asia to improve future performances of these assets. Total impairment was $260 million of which $257 million was non-cash impairment and $7 million is related to provision for expenses.

In 2023, Indorama Ventures has taken non-cash impairment of Corpus Christi assets for $308 million (net of tax $243 million) due to escalating project cost, labor shortages, and reduced fair market value.

Success in raising capital

Our initial public offering

Indorama Ventures became a public company on 25 September 2009. In January 2010, the Company completed an initial public offering of 400,000,000 ordinary shares at an offering price of THB 10.20 per ordinary share. The total amount raised in cash from the initial public offering of shares totaled THB 4,080 million. Simultaneously, the minority shareholders of Indorama Polymers Public Company Limited, a subsidiary of Indorama Ventures listed on the Stock Exchange of Thailand, were offered under an exchange offer, 582,727,137 ordinary shares of Indorama Ventures Public Company Limited. The ordinary shares of Indorama Ventures Public Company Limited were listed and commenced trading on the Stock Exchange of Thailand (SET) on 5 February 2010, under the ticker symbol IVL. The company soon became a member of the major indices, the SET 50 Index, FTSE SET Large Cap Index, and MSCI.

Rights offering

In November 2010, the Board of Directors passed a resolution to increase the authorized share capital from THB 4,334,271,047 to THB 4,815,856,719 and to reserve the increase in the authorized share capital of THB 481,585,672 for the exercise of Transferable Subscription Rights (TSRs). The Board approved a rights issue of TSRs to existing shareholders at the ratio of one TSR for every nine existing ordinary shares held of Indorama Ventures. The conversion ratio was 1:1. One TSR to one ordinary share and the exercise price of the TSR to ordinary shares was THB 36 per ordinary share. On 17 December 2010, at the extraordinary general meeting of shareholders (EGM), the shareholders approved the issue, allocation, and the terms and conditions of the TSRs. On 24 February 2011, the subscription of TSRs was completed with 99.67% of TSRs being exercised into shares. A total of 479,986,198 new shares started trading on the SET on 3 March 2011. The total amount raised in cash from this rights issue totaled THB 17,280 million.

Tender offer

Our PET business was listed on the SET as Indorama Polymers Public Company Limited (IRP) in 2005. On 24 December 2009, Indorama Ventures offered to purchase up to 100% of IRP through a tender offer whereby IRP shareholders (other than Indorama Ventures and its subsidiaries) were offered Indorama Ventures shares in exchange for IRP shares. The said tender offer was completed on 1 February 2010, which resulted in Indorama Ventures holding directly and indirectly (through its subsidiary Indorama Holdings [Thailand] Limited) around 99.08% of the issued and paid-up capital of IRP. IRP shares were delisted from the SET on 5 February 2010.

Warrants IVL-W1 exercised

Upon conversion of IVL-W1 until the last exercise date, which took place on 24 August 2017, the paid-up capital of the Company increased to THB 5,244,965,472 representing 5,244,965,472 ordinary shares.

Warrants IVL-W2 exercised

Upon conversion of IVL-W2 until the last exercise date, which was on 24 August 2018, the paid-up capital of the Company increased to THB 5,614,551,908 representing 5,614,551,908 ordinary shares.

Debenture issuance and offering

In October 2014, the Company completed the offering of subordinated perpetual debentures No. 1/2557 for THB 15 billion, with a fixed rate coupon of 7.0% per annum for the first five years, after which the coupon will be adjusted every five years as per the stated terms and conditions.

In October 2015, the Company issued its first overseas senior unsecured bond in the amount of SGD 195 million to institutional investors in Singapore through its wholly-owned subsidiary, IVL Singapore PTE Ltd. The Bond was rated AA (Stable) by Standard and Poor's with a tenure of 10 years at an interest rate of 3.73 per cent per annum. It is guaranteed by the Credit Guarantee & Investment Facility (CGIF), a trust fund of the Asian Development Bank and listed on the SGX-ST.

In November 2019, the Company issued and offered subordinated perpetual debentures of Indorama Ventures Public Company Limited No. 1/2019 for THB 15 billion, with a coupon of 5.0% per annum for the first five years, after which the coupon will be adjusted every five years as per the stated terms and conditions.

In November 2020, the Company issued and offered unsubordinated and unsecured debentures with a debenture holders' representative in the name-registered certificate of Indorama Ventures Public Company Limited No. 1/2020 for THB 9 billion.

- Tranche 1 Due B.E. 2568 with a tenure of five years for a principal amount of four billion baht with a fixed coupon rate of 2.78 per cent per annum.
- Tranche 2 Due B.E. 2570 with a tenure of seven years for a principal amount of 1,990,000,000 baht with a fixed coupon rate of 3.15 per cent per annum.
- Tranche 3 Due B.E. 2573 with a tenure of 10 years for a principal amount of 3,010,000,000 baht with a fixed coupon rate of 3.42 per cent per annum.

In November 2021, Indorama Ventures issued THB 10 billion in sustainability-linked bonds. The triple-tranche structure includes five, seven, and 10.5-year tenors, offering coupons of 2.48%, 3.00%, and 3.60% per year respectively.

In April 2022, the Company had issued unsubordinated and unsecured debentures with debenture holders' representative in the amount of 12,000 million baht.

- Tranche 1 Due B.E. 2570 with a tenure of five years for a principal amount of 4,300,000,000 baht with a fixed coupon rate of 2.66 per cent per annum.
- Tranche 2 Due B.E. 2572 with a tenure of seven years for a principal amount of 2,700,000,000 baht with a fixed coupon rate of 3.24 per cent per annum.
- Tranche 3 Due B.E. 2575 with a tenure of ten years for a principal amount of 5,000,000,000 baht with a fixed coupon rate of 3.65 per cent per annum.

In May 2023, the Company had issued unsubordinated and unsecured debentures with debenture holders' representative in the name-registered certificate in the amount of 10,000 million baht.

- Tranche 1 due B.E. 2569 with a tenor of three years for a principal amount of 2,950,000,000 baht with the fixed coupon rate of 3.00 per cent per annum.
- Tranche 2 due B.E. 2571 with a tenor of five years for a principal amount of 3,500,000,000 baht with the fixed coupon rate of 3.40 per cent per annum.
- Tranche 3 due B.E. 2576 with a tenor of 10 years for a principal amount of 1,550,000,000 baht with the fixed coupon rate of 3.89 per cent per annum.
- Tranche 4 due B.E. 2578 with a tenor of 12 years for a principal amount of 2,000,000,000 baht with the fixed coupon rate of 4.02 per cent per annum.

Nature of the Business

Revenue structure

Details	Year Ended 31 December 2021		Year Ended 31 December 2022		Year Ended 31 December 2023		Operated by*
	Total		Total		Total		
	(Bt million)	%	(Bt million)	%	(Bt million)	%	
Revenue breakdown by segment							
Combined PET	293,470	63	404,957	62	328,467	61	• AlphaPet, Inc., USA • Indorama Ventures Polymers Mexico, S. de R.L. de C.V., Mexico • IVL DHUNSERI Petrochem Industries Private Limited, India
Integrated Oxides and Derivatives	80,440	17	147,696	23	123,646	23	• Indorama Ventures Oxides LLC, USA • Oxiteno S.A. Indústria e Comércio, Brazil • Indorama Ventures (Oxide & Glycols) LLC, US
Fibers	117,105	25	131,205	20	110,994	20	• Indo Rama Synthetics (India) Limited, India • Avgol Industries 1953 Ltd., Israel • FiberVisions Corporation, USA
Elimination	(22,907)	(5)	(27,591)	(4)	(21,650)	(4)	
Consolidated revenue from sale of goods	**468,108**	**100**	**656,266**	**100**	**541,458**	**100**	

* Top three entities that generated the highest revenue in each segment for 2023

Source: The Company's consolidated financial statements.

Business overview

Indorama Ventures (SET: IVL) is a major global intermediate and downstream petrochemicals producer with 148 sites in 35 countries around the world (as of 31 December 2023) providing value-added and differentiated products and services to several diversified consumer goods industries, which serve common consumer needs in hygiene, improved lifestyles, and safety. Around 70% of our products are sold for application in daily necessities.

Indorama Ventures has integrated businesses which are aligned to create a sustainable value proposition. Our customer orientation, global reach, and scale allow us to benchmark ourselves globally to enhance operational excellence, while our industry-leading ESG initiatives make us a sustainable global producer.

Business description

Indorama Ventures operates in three segments, i.e., Combined PET, Integrated Oxides and Derivatives, and Fibers. All these segments are pioneers in their region and industry. All of them have a global ambition to grow in the right geographies and products. Ethane, PX, PP, recycled PET, and biomass are key feedstocks of the company, with end products primarily sold to FMCG companies globally.

Portfolio development

We continue to consolidate and gain leadership in our existing businesses while continuing to diversify our portfolio in adjacent business opportunities in a disciplined manner.

1. Combined PET

The manufactur and distribution of the PET value chain comprises PX, PTA, PET, Recycling (Integrated PET), PET preforms and packaging (Packaging), and specialty PET-related chemicals comprising PIA and NDC (Specialty Chemicals).

1.1 Integrated PET

This segment includes businesses in the aromatics and PET value chain, including PX, PTA, and PET. Given PET's unique property of 100% recyclability, reporting under this segment also includes Indorama Ventures' recycling initiatives across the polyester value chain.

PX business overview

Paraxylene (PX) is used in the polyester chain, mainly in the production of fiber, film, and polyethylene terephthalate (PET) bottle resins, via an intermediate product – purified terephthalic acid (PTA). A small amount of PX is used in solvents and to produce di-paraxylene and herbicides.

PTA business overview

Terephthalic acid is an organic compound and a colorless solid. It is a commodity chemical, used principally as a precursor to polyester PET, which in turn, is used to make clothing and plastic bottles.

PET business overview

Our PET business is part of our core polyester value chain business and comprised 38% of our production volumes in 2023. As of 31 December 2023, we were the largest PET resin producer in the world with an aggregate installed production capacity of around six million tons per annum.

Recycling business overview

To respond to the needs of customers and tackle the global challenges of resource scarcity and waste, we began to explore the recycling business as part of our corporate sustainability program and to also meet growing demand from our customers. We started producing PET flakes from discarded PET bottles in 2011, following our acquisition of Wellman Group, with flake processing facilities in Spijk, the Netherlands, and Verdun, France. Over the past several years, we continued to expand our PET recycling facilities in Thailand, the United States, Mexico, France, the Philippines, Brazil, and Poland. These expansions have strengthened our business and reflect our desire to continue to build a more sustainable business, while enhancing our ESG priorities.

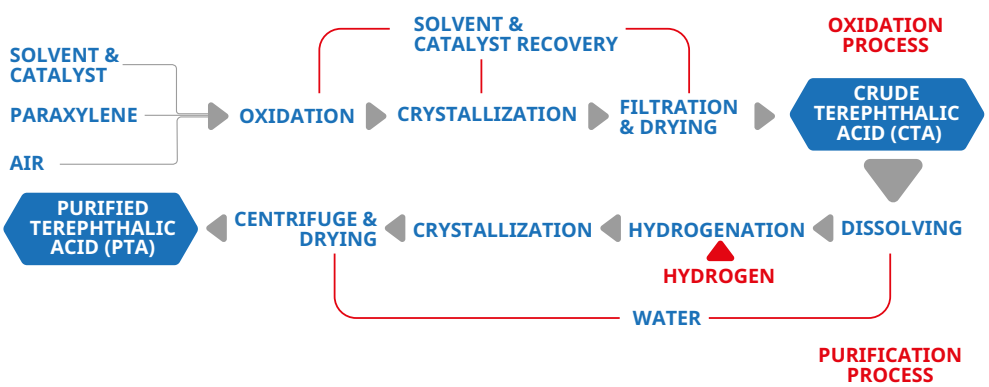
Integrated PET production process

PTA production process

Terephthalic acid (TA) is the result of the oxidation of paraxylene (PX). The commercial process utilizes acetic acid as a solvent, together with a catalyst composed of cobalt and manganese salts, with a bromide promoter.

A radical chain reaction occurs in a series of intermediates, starting with the oxidation of paraxylene and, finally, to terephthalic acid. It is then further purified to make PTA.

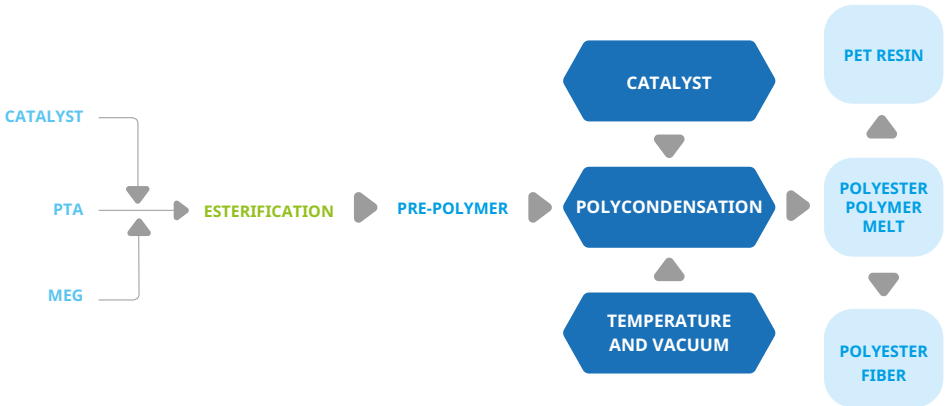
The chart below shows the PTA production process:



PET production process

PET resin comes from polyester polymer melt. The melt is converted into PET resin, either through a conventional solid-state process or through a newer technology – a melt-to-resin process. Under the conventional solid-state polycondensation process, the melt is extruded into strands, which are quickly cooled down by water. After solidification, the strands are cut into small pellets, dried, and further crystallized by being heated in a reactor under a specific temperature and pressure conditions under a nitrogen flow. Under the melt-to-resin process, the polycondensation process is completed during the melt phase, resulting in the formation of pellets without going through the solidification process. We have plants that use both of these technologies.

The chart below summarizes the PET production process:



Integrated PET products and markets

We have sales and marketing teams in each of the regions where we operate, and our marketing activities include regular meetings with our customers to understand their requirements, maintain good relationships, and provide first-rate customer service.

Our downstream PET and polyester production facilities use a significant proportion of our PTA production. We sell the remaining PTA that we do not use within the group to third-party customers. In 2021, 2022, and 2023, 67%, 69%, and 67%, respectively, of our PTA was sold to the group.

We classify our PET customers into brand owners, beverage companies that subcontract the production of PET bottles to converters using PET resin, traders, and direct PET converters.

Integrated PET competition

Indorama Ventures is the world's largest PET producer. Currently, in China, there are many new plants, especially PTA plants, using the latest technology and having lower conversion costs than previously. However, there are other competitors in Europe and North America. For PET competitors, Equipolymers and Neo Group are the main competitors in the European market; Alpek (DAK Americas LLC) and the Far Eastern Group are the principal competitors in the U.S. market, while Thai Shinkong Industry Corp. and PTTGC are the main competitors in the Thai market.

Integrated PET production facilities

The following table sets out the key figures for our integrated PET production facilities as of 31 December 2023:

Production Facilities	Effective Capacity* ('000 tons per annum)
PTA	5,058
PET	5,867
Recycling facilities	713
Total	**11,639**

* Effectively available for the period

1.2. Packaging

Packaging business overview

Indorama Ventures has been involved in this business for the past two decades, first through a joint venture with Sermsuk PCL in Thailand, and thereafter expanding our facilities to PET under-penetrated but high-growth countries in Southeast Asian and African markets, including the Philippines, Nigeria, Myanmar, Vietnam, and Ghana.

Our focus is on developing a sustainable packaging business, and not competing with PET customers, by broadening the production footprint around the world through M&A and a greenfield-expansion-led growth strategy.

Packaging products and markets

Our main customers are reputable global beverage and FMCG companies such as L'Oréal, Pepsi, Coca Cola, and P&G. We can produce clear, and colored preforms, bottles, and closures, and have been regularly working on lightweighting as per the requirements of our customers. Through superior engineering, technology, plus reliable customer service and delivery, we provide our customers with packaging solutions that help them build the value and volume of their brands. Similar to other segments, we have sales and marketing teams in each of the regions where we operate, which are overseen strategically by our sales and marketing head office in Thailand.

Packaging competition

The global beverage packaging market is extremely competitive due to the presence of many vendors involved in the packaging of soft drinks. The key players in the global market are Alpla, Ball Corporation, Crown Holdings, and Amcor.

Packaging production facilities

The following table describes our packaging production facilities as of 31 December 2023:

Production Facilities	Effective Capacity ('000 tons per annum)
Packaging – various sites	390

1.3 Specialty Chemicals

Specialty Chemicals business overview

Indorama Ventures entered this segment in 2011 with the acquisition of South Carolina-based Auriga Polymers, which owns the technology for the Crystal Clear Oxygen Barrier Resin, OxyClear®, and Polyshield®. We supplemented our presence in this segment since then through acquisitions and new product developments, including recycled products.

Specialty Chemicals products and markets

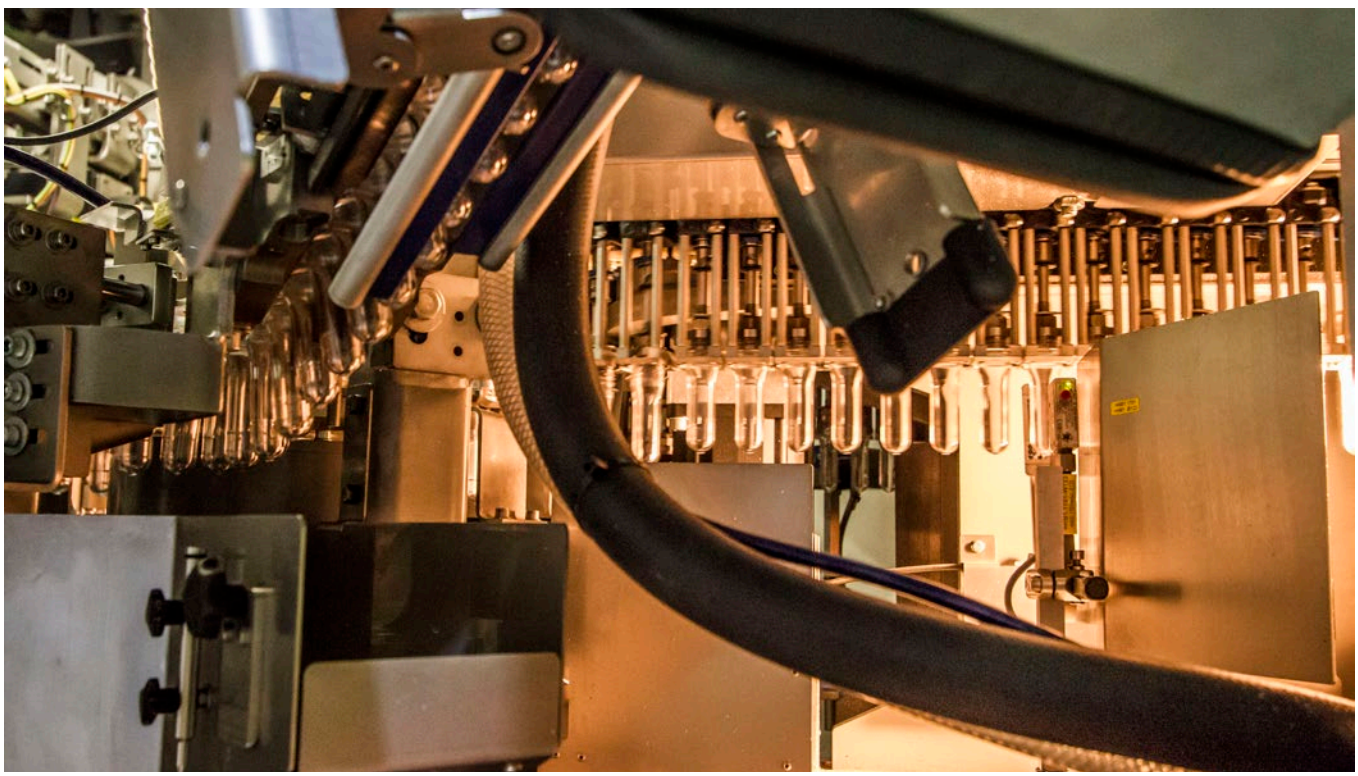
Our main customers for specialty PET resins are manufacturers of medical applications, premium bottles, film, and textile specialties. For PIA, we manufacture and sell to third party customers, as well as captive sales for PET resin production.

We sell NDC to outside customers who manufacture new-generation polyesters and resins to make items such as LCD flat panel displays and ultra-thin data storage tapes. We have sales and marketing teams in each of the regions where we operate, which are overseen strategically by our sales and marketing head office in Thailand.

Specialty Chemicals competition

Indorama Ventures is the only commercial producer of NDC in the world. Since there are no other commercial producers, there is no direct competition, however, products made from NDC monomers do have competition from products such as modified PET, PI, and PC.

Close to 40% of PIA demand is concentrated in domestic markets in Europe (where we are the only producer) and North America. Global PIA demand is close to 1.2 million tons, with China being the largest consumer as PET is the main application for PIA. Apart from PET, the main applications are coatings and unsaturated polyester resins (UPRs). We are the second largest producer of PIA worldwide and our main competitors are Lotte, FCFC, Ineos, and MGC.



Specialty Chemicals production facilities

The following table describes our specialty chemicals production facilities as of 31 December 2023:

Production Facilities	Effective Capacity ('000 tons per annum)
Specialty PET	525
PIA	285
NDC	28
Total	**838**

2. Integrated Oxides and Derivatives (IOD)

Indorama Ventures entered this segment by acquiring a monoethylene glycol (MEG) and PEO facility in the U.S. state of Texas in 2012. In 2015, we acquired an ethylene cracker site in Lake Charles, Louisiana, which now provides long-term ethylene supply integration, tied to advantaged shale gas feedstock on the U.S. Gulf Coast.

In 2019, we invested $2 billion in the integrated ethylene oxide (EO) and propylene oxide (PO) derivatives business of Huntsman Corporation, which was completed in January 2020. Not only had the acquisition reinforced the continuous growth of the company's Integrated Oxides and Derivatives segment, it also included Ethylene Oxides Derivatives and Propylene Oxides (PO) Derivatives in our product portfolio, each coming with its own strong market position.

In April 2022, we completed the acquisition of Brazil-based Oxiteno S.A. Indústria e Comércio, a subsidiary of Ultrapar Participações S.A. The acquisition gives us a unique portfolio in high-value surfactants and significantly extends our existing IOD business.

Oxiteno is a leading integrated surfactants producer, catering to highly attractive end-use markets in LATAM. The acquisition brings an excellent management team, world-class expertise in green chemistry innovation, strong customer relationships in Brazil, Uruguay, and Mexico, and substantial growth potential in attractive end markets, including the U.S., through a new facility in Pasadena, Texas. Oxiteno has a strong commitment to environmental governance, and its focus on lowering greenhouse gas emissions will also enhance Indorama Ventures' ESG credentials.

Integrated ethylene oxide business overview

Monoethylene glycol (MEG)

The other major feedstock produced by Indorama Ventures is MEG, which comes from ethylene via intermediate ethylene oxide. Ethylene oxide reacts with water to produce ethylene glycol.

The major end uses of ethylene glycol are in the polyester industry and in antifreeze for automobile radiators.

Diethylene glycol (DEG) and triethylene glycol (TEG)

Diethylene glycol (DEG) is a by-product made together with MEG through the processing of EO. DEG has broad applications and is used to manufacture polyester polyols, unsaturated polyester resins, buffet heaters, paints and coatings, plasticizers, liquid laundry detergents, cement grinding, and as an intermediate for polyethylene glycol.

Triethylene glycol (TEG) is a by-product of the EO process and is mainly used for natural gas dehydration. The other applications are air sterilizers, resin for windshield plate glass, and as an intermediate for polyethylene glycol.

Integrated purified ethylene oxide business overview

Purified ethylene oxide (PEO)

PEO comes from the direct oxidation of ethylene in the presence of a silver catalyst.

PEO is used in the production of detergents, thickeners, solvents, plastics, and various organic chemicals such as ethylene glycol, ethanolamines, simple and complex glycols, polyglycol ethers, and other compounds. PEO is a disinfectant that is widely used in hospitals and the medical equipment industry to replace steam in the sterilization of heat-sensitive tools and equipment, such as disposable plastic syringes. PEO derivatives are used to manufacture various products such as soaps, detergents, brake fluids, weed killer, and urethane foam.

Propylene oxide and MTBE business overview

Propylene oxide is a synthetic, highly-flammable, volatile, colorless liquid that is soluble in water and miscible with many organic solvents. Propylene oxide is used primarily as a chemical intermediate in the production of polyether polyols for use in making polyurethane plastics and propylene glycol. These are used in daily consumptions and various industry applications. Other major products are polypropylene glycol, propylene glycol ethers, and propylene carbonate.

Tertiary butyl alcohol (TBA) is produced as a co-product of propylene oxide in dedicated plants. TBA is dehydrated into isobutylene to produce methyl tertiary-butyl ether (MTBE). It can also be sold directly as an octane-enhancing component for gasoline.

Integrated surfactants business overview

Surfactants, LAB, and ethanolamines (EOAs) are chemical substances derived from EO, which are mainly used in the manufacture of hygiene products, including detergents, homecare products, soaps, toothpastes, shampoos, hair conditioners, and other foaming products. In addition, they are the components of various consumer products, such as beauty and personal care, cosmetics, sunscreens, herbicides, emulsifiers, and unsaturated polyester resins for coatings of materials, such as films and mirrors, among others.

Others

Oleochemical derivatives

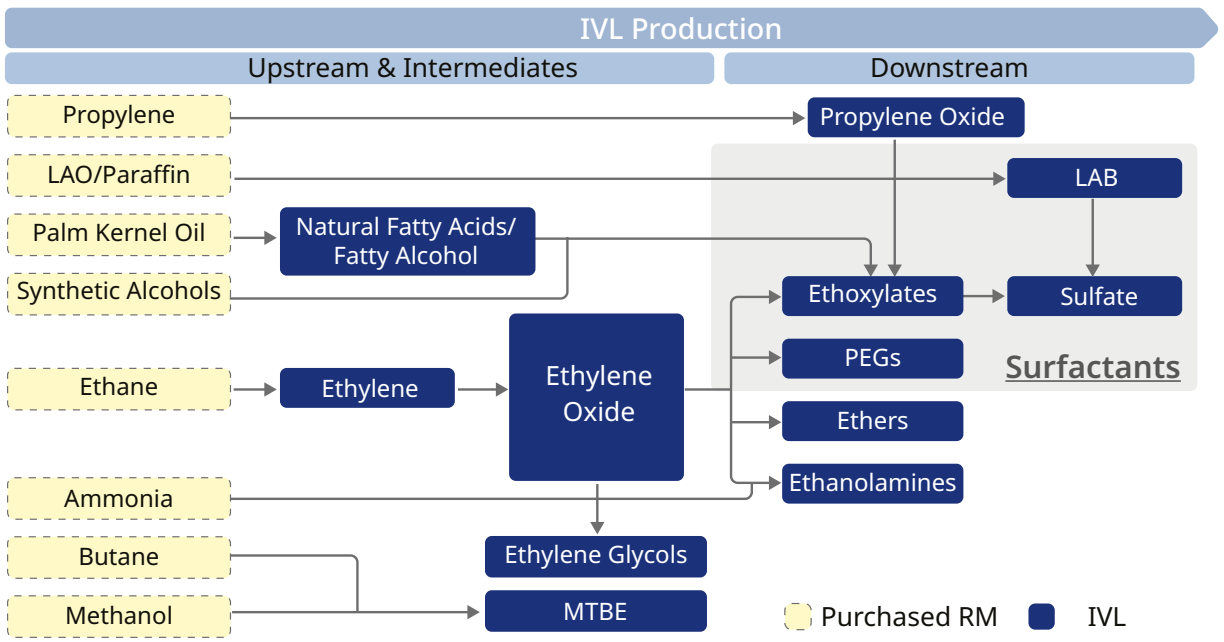
Oleochemical derivatives are products derived from PKO (palm kernel oil) and include products such as lauryl alcohol, caprylic / capric acid, cetostearyl alcohol, and glycerin. Most of lauryl alcohol is used for captive consumption in the production of alcohol ethoxylates and sulfates. Oleochemical is a raw material for fatty acids and glycerin.

Solvents

Solvents is a substance that dissolves a solute, resulting in a solution. These products have a range of uses including dissolving paint, oil, and grease; mixing or thinning pigments, pesticides, glues, epoxy resin and paints; and cleaning automotive parts, tools, and electronics.

Integrated Oxides and Derivatives (IOD) value chain

The chart below summarizes the value chain of IOD:



Products and markets

The majority of our sales are in the Americas.

EO is used as a chemical intermediate in the manufacturing of EO derivatives such as ethanolamines, polyols, ethers, and surfactants, which are in turn used in the manufacturing of agricultural chemicals, rigid and flexible foams, cleaning solvents, and the personal care and beauty care industries, respectively.

Monoethylene glycol is used as a feedstock in the production of PET and polyester fibers.

PO is consumed as the raw material of various consumer products, including polyurethane plastics, thermal insulators, solvents, preservatives in cosmetics, polyurethane resin for gravure ink, and cleaners.

Surfactants, LAB, and ethanolamines (EOAs) are used in the manufacturing of hygiene products, including detergents, home care products, soaps, toothpastes, shampoos, hair conditioners, and other foaming products.

In 2021, 2022, and 2023, 13%, 20%, and 16%, respectively, of our EO/EG was sold to the group, and 87%, 80%, and 84%, respectively, of our EO/EG was sold to third-party customers.

Surfactants competition

Indorama Ventures is one of the major producers of surfactants with upstream integration in the Americas. Other major integrated producers are BASF, Dow, Sasol, and Shell Chemical.

Glycols competition

The global market for MEG is highly competitive, involving a large number of producers located throughout the world. The shale gas revolution in the U.S. has given its producers advantaged ethylene as a feedstock material, ensuring the U.S. is a low-cost region for MEG production. Indorama Ventures' integration into MEG adds value to the U.S. PET and polyester margin chain. The largest competitors in North America include Shell Chemical, MEGlobal, Equistar, and Sabic, along with Pemex in Mexico.

Integrated Oxides and Derivatives production facilities

The following table sets out the key figures for our olefins production facilities as of 31 December 2023:

Production Facility	Effective Capacity ('000 tons per annum)
Integrated Intermediates	1,914
Integrated Downstream	2,163
Total	**4,077**

3. Fibers business

This segment includes all our offerings in the mobility (automotive and tires), personal hygiene, and lifestyle domains. Each of these domains continues to grow at a rate of around 3-4% annually in normal market conditions, offering the potential to become multibillion-dollar businesses individually. Growth in the fibers business comes as a result of trends toward lightweighting, use of sustainable materials, increasing attention being paid to personal hygiene, and changes in the choice of personal wear, specifically by the younger generation.

Polyester fibers business overview

Polyester was discovered in the 1940s and has been manufactured on an industrial scale since 1947. Polyester fibers are the first choice for apparel and are used in trousers, skirts, dresses, suits, jackets, blouses, and outdoor clothing.

Polyester fibers products

Polyester fibers are most commonly used for apparel, from sportswear to high fashion; home textiles, such as bedding and carpets; nonwoven materials, including surgical gowns; technical textiles such as filters; and automotive uses, including carpets and insulation.

With the acquisition of Performance Fibers in China in 2015, Indorama Ventures can produce polyester yarns and polyester fabrics that are used in tires and supplied to various world-class tire companies.

Polyolefin fibers business overview

The fiber-forming substance is any long-chain synthetic polymer composed of a weight of at least 85% ethylene, propylene, or other olefin unit. Italy began production of olefin fibers in 1957, followed by the United States in 1960. The first commercial producer of olefin fibers in the United States was Hercules, Inc., now known as FiberVisions and wholly owned by Indorama Ventures.

Polyolefin fibers provide warmth without much weight. Olefin is resistant to abrasions, stains, sunlight, fire, and chemicals. It does not dye well, but has the advantage of being colorfast once pigments are added in the fibers. Since olefin fibers have a low melting point, they can be thermally bonded. One of the most important properties of olefin fibers is its strength, which can be tailored for different applications.

Polyolefin fibers products

Uses include nonwoven fabrics for diapers, feminine care, and adult incontinence products (as top sheets, back sheets, leg cuffs, elastic waistbands, and transfer layers); in spunlaced nonwoven products such as medical disposable textiles; filtration products; or in air-laid nonwoven structures such as absorbent cores and wet wipes.

Bicomponent fibers business overview

Bicomponent fibers may be defined as "extruding two polymers from the same spinneret with both polymers contained within the same filament." Bicomponent fibers made of polyethylene sheath and polypropylene core are important fibers for the nonwoven fabric market.

Worsted wool yarns business overview

Worsted wool fabric is typically used in the making of tailored garments such as suits, as opposed to woolen wool, which is used for knitted items such as sweaters. The essential feature of worsted yarn is its straight, parallel fibers. Worsteds differ from woolens, in that the natural crimp of the wool fiber is removed in the process of spinning the yarn. Indorama Ventures produces wool from Merino sheep. These sheep are sought after for their coats, which are said to produce the finest, softest wool available.

Worsted wool yarns products

Worsted wool produced by Indorama Ventures is used in high-end suiting for both men and women.

Nylon 6.6 tire cord yarns business overview

With the acquisition of PHP Fibers GmbH and its subsidiaries (PHP), Indorama Ventures holds 80% of PHP while the remaining 20% is held by Toyobo Co., Ltd., a leading Japanese manufacturer of high function products, including among others, automotive products.

The acquisition of PHP significantly enhances our High Value-Added (HVA) product portfolio with the addition of high performance automotive and industrial products.

Nylon 6.6 tire cord yarns products

These yarns are extensively used in airbags and tire cords in the automotive sector.

Fibers products and markets

Our main customers for fiber and yarn products are companies producing textiles for apparel, fast moving consumer goods companies in hygiene, companies producing home textiles, and industrial companies such as automotive companies and packaging film producers.

Fibers competition

Competition in the global fibers and yarns industry is characterized by the presence of large, diversified industrial companies, as well as a large number of relatively small niche players with a capacity of sometimes less than 10,000 tons per annum. Chinese producers dominate polyester fibers globally before Indonesia and India. Mobility and hygiene fibers have various producers in different parts of the world.

Fibers production facilities

The following table describes our fibers and yarns production facilities as of 31 December 2023:

Production Facilities/ Location	Effective Capacity ('000 tons per annum)
Total	2,404

Management Discussion and Analysis (MD&A)

The following MD&A should be read in conjunction with our consolidated financial statements. It includes forward-looking statements reflecting our current views with respect to future events and performance. Thus, a number of factors could cause actual results or outcomes to differ materially from those expressed in any forward-looking statement, as described in our Risk Factors and statements appearing elsewhere.

2023 Executive Summary

2023 performance highlights

- Revenue of $15.6 billion, a decline of 17% year on year (YoY)
- EBITDA of $1.12 billion, a decline of 53% YoY
- Operating cash flows of $1.5 billion, a cash conversion of 136%
- Core EPS of THB 0.28 and Reported EPS of THB (2.06)
- Non-cash impairment of Corpus Christi assets for $308 million (net of tax $243 million)
- Dividend of $185 million paid to shareholders during the year
- Net Operating Debt to Equity of 1.13x

2023 Summary Financials

Table 1: Financials of Consolidated Business

$ million (except where stated otherwise)	Full Year		
	2023	2022	2023 YoY
Production Volume (MMT)[3]	13.92	14.65	(5)%
Sales Volume (MMT)[3]	14.08	14.68	(4)%
Consolidated Revenue[1]	15,555	18,715	(17)%
EBITDA[2]	**1,120**	**2,387**	**(53)%**
Combined PET	553	1,411	(61)%
Integrated Oxides and Derivatives	440	743	(41)%
Fibers	107	233	(54)%
EBIT	325	1,653	(80)%
Net Profit after Tax and NCI	**(310)**	**884**	**(135)%**
Net Profit after Tax and NCI (THB million)	(10,798)	31,006	(135)%
EPS after PERP Interest (THB)	**(2.06)**	**5.39**	**(7.45)**
EBITDA/ton ($)	**81**	**163**	**(51)%**
Operating Cash Flow	**1,526**	**2,224**	**(31)%**
Net Operating Debt to Equity (times)	**1.13**	**0.96**	**+18 bps**

* Combined PET includes Integrated PET, Specialty Chemicals, and Packaging.

[1] Consolidated financials are based upon elimination of intra-company or intra-business segment transactions.

[2] Total of each segment may not always tally with consolidated financials due to holding segment.

[3] Volumes exclude PX and ethylene being captive.

Overview

Indorama Ventures delivered 2023 revenue of $15.6 billion, down 17% YoY, EBITDA of $1.12 billion, a decline of 53% YoY from the peak performance year of 2022, and a core EBITDA of $1.3 billion, a decline of 44% YoY. Average Brent crude oil price for the year was $83/barrel (decline of 18% YoY), resulting in inventory loss of $115 million vs inventory gain of $76 million in 2022. Full-year results were impacted by the challenging macroeconomic environment, characterized by Russia/Ukraine conflict, inflationary pressures, high interest rates, and sluggish economic growth in Europe and China.

With regards to the aromatics sector specifically, 2023 posed significant headwinds in the form of destocking, high feedstock costs in the West, and compressed Chinese benchmark margins. These factors influenced Indorama Ventures' performance in terms of both volume and value. 2023 has been a challenging year, but the company has taken several measures to counterbalance the external pressures, achieving positive free cash flow of $149 million.

Geographically, results declined across all three regions, with EMEA being the most impacted, turning from a positive to a negative EBITDA contribution in 2023 due to both volume and margin pressure, as well as continued high energy prices, albeit lower than 2022.

As compared to 2022, group volumes declined by 4% YoY, creating a negative impact of $318 million YoY, primarily driven by the unprecedented destocking trend that began in the second half of 2022 following supply chain normalization and crude oil price decline. This was further exacerbated by the higher interest rate environment, lower than expected growth in China, and slow demand in Europe. This impact was substantially overcome with energy costs lowered through the year, especially in the West, reducing operating costs by $252 million, net of hedging loss of $103 million in 2023, and $78 million operational excellence captured through Olympus 1.0.

With regards to value, Indorama Ventures' spreads were substantially lower during the year, resulting in a negative impact of $1 billion. The impact from the drop in PET spreads was $716 million YoY due to a decline in the China benchmark (reduction of $105/ton), higher feedstock in the West, and a lower premium due to supply chain normalization. The addition of new integrated polyester value chain capacity in China, coupled with lower than anticipated domestic consumption growth, resulted in the current oversupply and subsequent sizable decline in benchmark polyester margins.

Regional disparity in aromatics pricing continues to be wide (2023: U.S. and Asia PX price gap $311/ton against 2018 to 2021 average gap of $127/ton, though lower than 2022 of $401/ton), bringing significant cost pressure and import competition in the West due to normalization of supply chain. We view some of the Western assets' competitiveness to be a longer-term concern and are therefore reassessing our asset footprint in our CPET and Fibers segments. These include make-or-buy decisions as well as geographical rebalancing towards Asia. The combination of our strategic reviews will be completed in the first half of 2024 and, together with other previously announced footprint actions, ensures supply/demand

balance is appropriate in our core markets for the current macroeconomic conditions, while also ensuring our customers have access at scale to high-quality, innovative polymers, recycled PET, and fibers. These management actions will enable our ability to achieve appropriate returns on capital for the value delivered to customers. Fixed and variable cost management and operational performance initiatives will get a major boost from the footprint optimization, driving operating rates gradually to 90% starting mid-2024 to full operating rates in 2026.

In the IOD segment, spreads declined by $188 million YoY. Integrated Intermediates results were lower by 16% YoY due to poor MEG spreads, while MTBE margins remained supported through the year, bolstered by strong gasoline demand and low raw material costs. Integrated Downstream performance was impacted by $219 million, lower by 42% YoY due to destocking, loss of volumes in premium margin segments such as Crop Solutions, and import pressure in South America.

Management actions

There has been a concerted effort to manage cash this year, resulting in operating cash flow of $1.5 billion (136% cash conversion), supported by a $513 million release of working capital and a 9-day reduction in working capital days. In addition, capex plans have been reduced by $276 million from what was announced at the beginning of the year. Cash conservation remains a priority for 2024.

In this year, Indorama Ventures has taken non-cash impairment of Corpus Christi assets for $308 million (net of tax $243 million) due to escalating project costs, labor shortages, and reduced fair market value. Annual maintenance cost of the site for Indorama Ventures' 1/3rd share is approximately $6 million to $10 million per annum. The project is currently on hold until we identify an optimized project execution plan in consultation with partners to control the overall project cost.

Project Olympus 1.0 has allowed a structured and disciplined approach to continuous cost and commercial innovation that is crucial for our business to remain in the first quartile position. Our continued focus on cost optimization and operational efficiencies has translated into run rate efficiency gains of $527 million in 2023 (vs $449 million in 2022). Beginning in 2024, we launch the next phase, Olympus 2.0, to unlock further value of approximately $450 million by leveraging the recently completed SAP S/4HANA system implementation and various new digitally-led initiatives.

Outlook

2024 is expected to continue to remain challenging, albeit with some improvement. We anticipate around 4% to 5% increase in volumes with destocking having bottomed out across most product categories as interest rates decline from their 2023 peak, coupled with a modest improvement in margins.

We believe the current benchmark integrated PET spread is not sustainable and anticipate a gradual recovery going forward. With anti-dumping duties and other trade barriers in markets like the E.U., Mexico, India, and others, Indorama Ventures' premium spread over China's benchmark is expected to widen, which stands to benefit the company since the majority of our operations is situated outside of China.

We believe gasoline demand will begin to stabilize going forward as post-Covid activity normalizes. Coupled with a global balancing of refinery production, the regional MX price disparity will narrow, aiding our Western polyester business with lower feedstock costs.

We continue to stringently review our capital allocation to conserve cash and lower fixed costs. Each business segment has identified areas of focus with detailed and resourced action plans to remain vigilant on this front. For instance, the Fibers segment has identified four operational priority areas for 2024 (operating rates, fixed cost, commercial excellence, and working capital) with an emphasis on EBITDA and cash flow enhancement. Fibers also remains on track with the footprint optimization plans announced earlier in 2023.

2026 aspiration

Today, Indorama Ventures has created a solid platform with leadership in sustainable and growing markets. The focus over the next three years will be on the continual improvement of quality of earnings through enhancing the quality of our assets, our processes, and our organization.

As mentioned in the last release, the company is conducting a strategic review of all business segments with the aim to deleverage, unlock further value potential, and enhance shareholder value. We are reviewing various strategic options to prepare ourselves for the next era of growth. Further details were shared at the Capital Markets Day on 5 March 2024.

The aspirations for 2024-2026 across various key performance indicators include:

- Maintain net debt to EBITDA below 3x
- Improve ROCE to over 12%, creating healthy positive economic value add
- Olympus 2.0 to target efficiency gains of $450 million

Reconciliation of Core to Reported net profit

$million

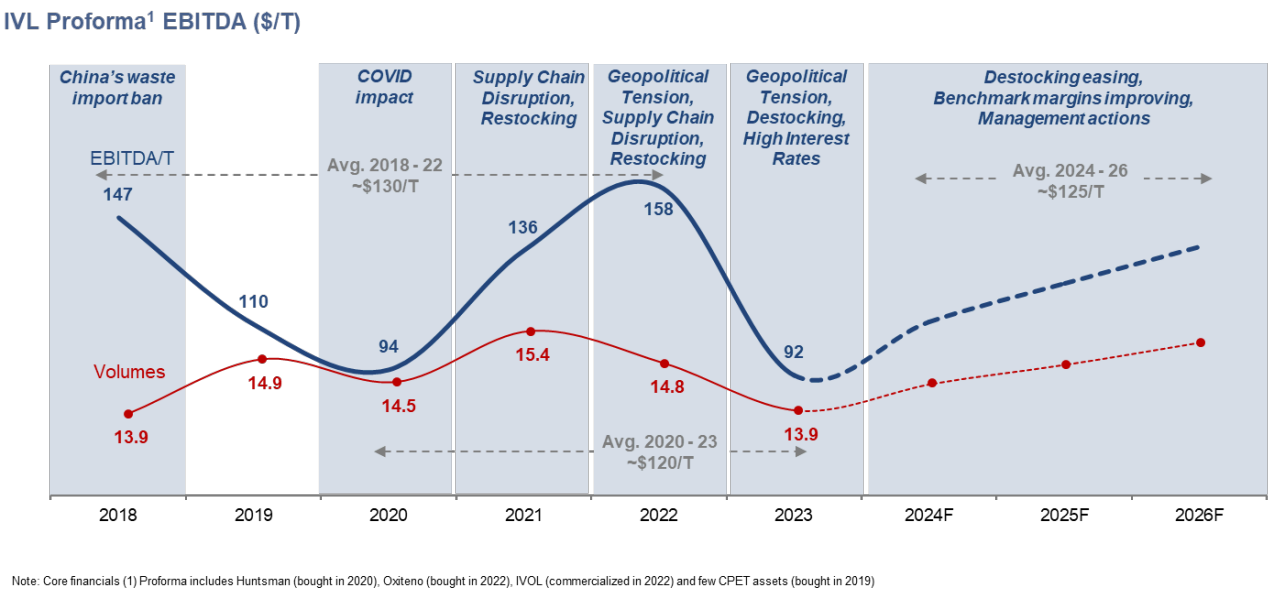
	2023	2022
Core NP after Tax and NCI	**67**	**986**
Inventory (gains)/losses	(115)	76
Tax on inventory gains/losses	29	(19)
Impairments	(308)	(247)
Tax on impairments	65	-
Other extraordinary taxes	-	46
Extraordinary forex	(18)	-
Insurance income	13	91
Acquisition cost, pre-operative expense, and other items	(44)	(48)
Reported NP after Tax and NCI	**(310)**	**884**

$million

	2023	2022
Core EBITDA	**1,284**	**2,278**
Inventory (gains)/losses	(115)	76
Extraordinary forex	(18)	-
Insurance income	13	91
Acquisition cost, pre-operative expense, and other items	(44)	(58)
Reported EBITDA	**1,120**	**2,387**

Apart from the Corpus Christi non-cash impairment as mentioned above, performance was negatively impacted due to inventory losses of $115 million in 2023, with lower prices and other extra items.

Across-the-cycle performance of Indorama Ventures



Note: Core financials (1) Proforma includes Huntsman (bought in 2020), Oxiteno (bought in 2022), IVOL (commercialized in 2022) and few CPET assets (bought in 2019)

If we look at across-the-cycle performance of Indorama Ventures from peak to peak (2018 to 2022) on a proforma basis, our portfolio delivered an EBITDA of $130/ton. Similarly, when we see trough to trough (2020 to 2023) on a proforma basis, our portfolio delivered an EBITDA of $120/ton.

Looking ahead, we anticipate growth in volumes and improvement in quality of earnings which you can see from 2024 to 2026 in the graph above, where we plan to deliver $125/ton of EBITDA on average during these three years. These will be driven by destocking easing, benchmark margins improving, and management actions. Details of these actions were discussed at the Capital Markets Day on 5 March 2024.

ESG journey

Indorama Ventures moves strongly ahead on our ESG ambitions, while continuing to make investments in ESG-related activities. Below are the notable achievements from 2023:

- Achieved 100 billion PET bottles recycling milestone (on 25 Sep 2023) since starting our recycling business in 2011, resulting in 2.1 million tons of waste diverted from the environment and 2.9 million tons in carbon footprint reduction. (Source).
- Continuing with our strategic ambition to expand our recycling footprint, 2023 added 45 kt from new recycling capacities in Indonesia and Brazil, plus the full-year impact of recycling facilities in the Philippines and France. This is further expanding by another 50 kt in 2024 from expansion in France and the full-year impact from the Indonesia site.
- In 2023, Indorama Ventures got listed in the DJSI-World and Emerging Markets for the 5th & 7th consecutive year respectively in the Chemicals sector, and as a member in S&P Global Sustainability Yearbook 2023.
- MSCI: Upgraded to 'A' from 'BBB', published on 21 March 2023. We are also placed in the top quartile for 4 (out of 6) key topics.
- EcoVadis: Improved from Gold (top 5% of suppliers assessed) to Platinum (top 1% of total suppliers assessed by EcoVadis).
- CDP: 'B' rating for Climate Change and 'B' rating for Water.
- Sustainalytics: Indorama Ventures has improved our company risk profile in 2023 with the Risk Indicator number scored at 22.2, lowered from 22.8 in 2022, remaining within the group of medium risk level, and the Risk Management capability indicator scored at 59.9, improved from 58.9 in 2022, remaining within the group of companies with strong risk management. Out of the 563 companies in the Chemical industry sector, Indorama Ventures is ranked within the 12th percentile.

Corporate strength

We operate with a balanced and disciplined approach to cash flow allocation to dividends, debt servicing, maintenance capex, and growth capex. Some of our corporate actions and achievements are as follows:

- Indorama Ventures achieved operating cash flow of $1.5 billion (136% cash conversion of EBITDA) with continued focus on working capital which resulted in a $513 million working capital release.
- We continued to deliver on our transformation agenda via Olympus 1.0 and unlocked value of $527 million on an annual run rate basis by end of 2023.
- Maintaining average net debt to equity at 1x across cycles (2023: 1.31x). Deleveraging and improving the quality of earnings is the key focus in the next phase of the company.
- TRIS maintained rating at AA- with a stable outlook. Our efforts to strengthen our business profile and financial profile were acknowledged and validated, despite a challenging 2023.
- Completed refinancing of $1 billion through bank loans and issuance of Thai baht debentures, achieved increase of debt maturity profile and decrease in annual interest cost of $11 million p.a. on a run rate basis.
- Maintain liquidity in the form of cash and cash under management plus unutilized credit lines (2023: $2.4 billion). Liquidity increases due to the reduction in short-term loans utilization.
- Ongoing committed refinancing of $750 million for 2024 and $400 million for 2025, expected to be completed in 1H24.
- ESG-linked debt proportion increased to 32% of total debt in 2023 (2022: 20%).

2023 performance by business segments

Combined PET (CPET)

2023 vs 2022

CPET delivered EBITDA of $553 million in 2023, a decline of 61% YoY. Excluding inventory loss of $82 million (gain of $94 million in 2022) and extraordinary items, the segment core EBITDA declined 51% YoY to $657 million.

2022 was a peak year due to higher margins led by supply chain disruption, which helped in securing higher premiums. The headwinds began from second half of 2022, where the industry witnessed demand slowdown amid heavy destocking, which carried over into 2023.

In 2023, the segment experienced 6% YoY decline in volume, primarily driven by global destocking impacts across the industry and a combination of subdued demand and import pressures in the EMEA region. Additionally, the mothballing of our Portugal PTA site, following a detailed internal review, reduced our PTA sales. However, with destocking coming to an end, we expect a gradual volume improvement in 2024.

Margin is compressed due to reduced integrated PET margins in China, lower freight rates, and PET capacity expansion in China. Additionally, higher feedstock costs due to widened disparity in aromatics pricing, impacted our margins in the Western hemisphere.

Despite margin pressure, Indorama Ventures maintains premiums over the industry benchmark due to our global presence and resilient domestic supply chain capability, a unique strength of CPET, which led to above average margins in 2022.

We continued with our strategic focus on recycling footprint expansion. In 2023, we added 45 kt of new recycling capacities in Indonesia and Brazil, and full-year impact in the Philippines and France. In 2024, we are adding a further 50 kt by expansion in France and realizing the full-year operation of capacity in Indonesia.

The packaging business remained robust, with the additional contribution from Vietnam packaging, where Indorama Ventures is the largest PET packaging producer.

To manage the challenging environment related to cost inflation, high interest rates, and labor shortages, Indorama Ventures, along with its partners, has decided to pause the capital expenditure on the integrated

PTA/PET site at Corpus Christi, Texas. Following the decision, the company subsequently recorded a non-cash impairment loss, net of tax, of $243 million in 4Q23.

With lower gas prices, our energy cost reduced YoY by $124 million (net of hedging loss $50 million).

	2023	2022	2023 YoY
Integrated PET			
Sales Volume (MMt)	8.97	9.38	(4)%
EBITDA ($m)	468	1,245	(62)%
Packaging			
Sales Volume (MMt)	0.28	0.27	5%
EBITDA ($m)	102	99	3%
Specialty chemicals			
Sales Volume (MMt)	0.49	0.66	(25)%
EBITDA ($m)	(18)	66	(126)%
Combined PET			
Sales Volume (MMt)	9.74	10.31	(6)%
EBITDA ($m)	553	1,411	(61)%

Integrated Oxides and Derivatives (IOD)

2023 vs 2022

In 2023, the IOD segment delivered an EBITDA of $440 million, a decline of 41% YoY. Excluding inventory loss and extraordinary items, the segment core EBITDA declined 34% YoY to $478 million.

Volume marginally decreased by 1% YoY, supported by three additional months of Oxiteno volumes in 2023. Downstream volume was impacted due to destocking in most of the end markets, sluggish economic activates, higher interest rates, slower China recovery, and pressure from imports.

With lower gas prices, our energy cost reduced year on year by $83 million (net of hedging loss $42 million).

Integrated Downstream portfolio

In 2023, Integrated Downstream delivered $302 million of core EBITDA, a reduction of 42% YoY. Downstream spreads were impacted on account of destocking across the board, but particularly impacting us in the premium margin products and import pressure for commodities in South America, post supply chain normalization. Sales volume and margin drop was particularly felt in Crop Solutions and housing related businesses i.e., propylene oxide, as well as in ingredients used in soaps and detergents i.e., oleochemicals, linear alkyl benzene, and solvents. Ethanolamines' profitability was comparable YoY.

Below are comments on the varying effects experienced across different end markets and regions:

Home and Personal Care has remained strong. There has been some inflation-driven decline as consumers opt for lower-priced products with reduced surfactants content and returned to large volume washes. Demand to grow in the emerging markets of APAC and South America. As inflation eases and consumers return to the premium brands, we expect continued growth in the volumes of this portfolio.

The Energy and Resources market remained steady in the wake of record oil and gas production and geopolitical conflicts. The North American market maintained its strength, buoyed by elevated crude oil prices. We anticipate this will continue and grow the improvement in global and Chinese demand.

Crop Solutions was significantly impacted by destocking where channel inventory was very high in 2022. In addition, there has also been some pricing pressure due to cheaper Chinese imports on the commodities products. We anticipate a rebound from the negative impacts as agriculture overall remains strong and is expected to grow. Leveraging our robust presence and diverse portfolio, IOD is well positioned to capitalize on opportunities in key agricultural markets in the U.S., Brazil, India, and Australia.

Construction and Coatings, particularly in North America, was affected by high interest rates and elevated inflation levels, resulting in subdued performance. Demand headwinds were compounded by increased global trade volumes trying to find a home, hence import margins. We expect the markets will gradually improve as interest rate premise eases and transport costs rise.

Innovation and sustainability remain a priority for IOD Downstream as we continue to offer value-added solutions to our customers. The vitality index, which is a measure of our contribution margin of new products, has increased in the last few years from 10% to currently 16%, backed by world-class global R&D centers in the U.S., Brazil, India, and Australia.

Integrated Intermediates portfolio

This vertical comprises the integrated EG and MTBE businesses. In 2023, Integrated Intermediates delivered $176 million in core EBITDA, a decrease of 16% YoY, primarily from MEG in the Americas. U.S. MTBE spreads slightly improved from $623/ton in 2022 to $651/ton in 2023, driven by the ongoing robustness in octane values and gasoline demand.

Our Integrated MEG business continued to maintain shale gas advantage over Asia, however, Asia benchmark spreads remain suppressed at unsustainable levels. Benchmark China integrated margins in 2023 were softer by 5% YoY amid lackluster growth of polyester. For Indorama Ventures, MEG serves as an integrated component to our CPET segment, and we are running our MEG capacities mainly to fulfill captive needs and long-term contracts. 2024 management actions being considered are to consolidate MEG production between our three sites in the Americas to increase operating rates and lower fixed and variable cost in order to reach break-even EBITDA and better in 2024 and beyond.

	2023	2022	2023 YoY
EBITDA ($m)	440	743	(41)%
Int. Downstream	279	528	(47)%
Int. Intermediates	161	215	(25)%

Fibers

2023 vs 2022

In 2023, the Fibers segment delivered an EBITDA of $107 million, a decline of 54% YoY. Excluding inventory loss of $17 million and extraordinary items, the segment core EBITDA declined 41% YoY to $124 million.

Fibers' performance in 2023 continues to be sub-par where all three verticals underperformed to its potential, primarily due to weak demand and persistent overcapacity in all markets. High cost, primarily in Europe, remains a key challenge and the segment has crafted a thorough action plan to optimize the asset footprint over the coming years to improve the quality of earnings.

In 2023, while the Mobility market showed promising signs of development with an uptick in automotive production, we did not fully benefit from the growth, mainly because of lower replacement tire volumes in the West. The replacement tire space has been relatively weak, indicating room for improvement.

The Hygiene sector has yet to see significant improvement post COVID. The overcapacity, which was built during the pandemic, entered the market at the time when demand normalized. The market is currently facing the dual challenge of excess supply and normalized consumer interest. Additionally, reduced freight rates supported the export business for Asian competitors. The vertical was also impacted by lower YoY lag gain, resulting from elevated polypropylene prices.

Despite maintaining solid volumes, the Lifestyle vertical has faced challenges, primarily driven by overcapacity being built in China, leading to increased exports and subsequent margin compression. This has put pressure on profitability across the industry. In India, BIS certification is expected to support volumes and spreads in 2024. Additionally, we are exploring innovative strategies to differentiate products in the market, which can help mitigate these challenges and foster sustainable growth.

Looking ahead to 2024, we have implemented a volume recovery strategy, strategically securing contracted volumes with brand owners. Domestic market protection measures in various countries like India, Indonesia, and Brazil will serve as valuable safeguards, especially when market conditions improve. This proactive approach underscores our commitment to navigating challenges and capitalizing on opportunities, positioning us for sustained success in the foreseeable future.

	2023	2022	2023 YoY
Lifestyle			
Sales Volume (MMt)	1.09	1.06	2%
EBITDA ($m)	7	76	(91)%
EBITDA/t	6	73	(92)%
Mobility			
Sales Volume (MMt)	0.20	0.22	(10)%
EBITDA ($m)	59	87	(33)%
EBITDA/t	294	392	(25)%
Hygiene			
Sales Volume (MMt)	0.30	0.33	(7)%
EBITDA ($m)	41	70	(41)%
EBITDA/t	135	215	(37)%
Total Fibers			
Sales Volume (MMt)	1.59	1.61	(1)%
EBITDA ($m)	107	233	(54)%
EBITDA/t	66	146	(55)%

*EBITDA/t calculation based on production

Business Segments Definitions

Indorama Ventures now categorizes its businesses in three segments. This section of the document will discuss the performance of these three segments.

Combined PET	**Integrated PET**	**Full PET value chain** PX (paraxylene), PTA (purified terephthalic acid), PET (polyethylene terephthalate), and Recycling
	Specialty Chemicals	**Specialty PET-related chemicals** (for medical, premium bottles, films, and sheets); **PIA** (purified isophthalic acid, for PET production, unsaturated polyester resins, and coatings); **NDC** (naphthalene dicarboxylate, for optical displays and industrial/mobility uses)
	Packaging	**PET preforms and packaging** (e.g., bottles) for beverage and food end uses
Integrated Oxides and Derivatives	**Includes Integrated EG, Integrated Purified EO, PO/MTBE and Integrated Surfactants, including EOA, LAB, and others**	
Fibers	**Polyester, rayon, nylon, polypropylene, composites, and worsted wool fibers, for three end-use segments:** Mobility (automotive parts e.g., airbags, tires, seatbelts), Lifestyle (apparel, active wear), and Hygiene (diapers, feminine care)	

Performance Highlights

Table 2: Segment Results

$million (except where stated otherwise)	Full Year		
	2023	2022	2023 YoY
Crude Oil Brent ($/bbl)	**83**	**101**	**(18)%**
Production Volume (MMT)[3]	**13.92**	**14.65**	**(5)%**
Combined PET	9.68	10.40	(7)%
Integrated Oxides and Derivatives	2.63	2.65	(1)%
Fibers	1.61	1.60	1%
Operating rate (%)[4]	**74%**	**79%**	**(7)%**
Combined PET	75%	81%	(7)%
Integrated Oxides and Derivatives[4]	73%	76%	(5)%
Fibers	67%	71%	(6)%
Sales Volume (MMT)[3]	**14.08**	**14.68**	**(4)%**
Combined PET	9.74	10.31	(6)%
Integrated Oxides and Derivatives	2.75	2.76	(1)%
Fibers	1.59	1.61	(1)%
Consolidated Revenue[1,2]	**15,555**	**18,715**	**(17)%**
Combined PET	9,436	11,548	(18)%
Integrated Oxides and Derivatives	3,552	4,212	(16)%
Fibers	3,189	3,742	(15)%

$million (except where stated otherwise)	Full Year		
	2023	2022	2023 YoY
EBITDA	**1,120**	**2,387**	**(53)%**
Combined PET	553	1,411	(61)%
Integrated Oxides and Derivatives	440	743	(41)%
Fibers	107	233	(54)%
EBITDA Margin (%)	**7%**	**13%**	**(555) bps**
Combined PET	6%	12%	(636) bps
Integrated Oxides and Derivatives	12%	18%	(524) bps
Fibers	3%	6%	(290) bps
ROCE (%)	**2.9%**	**15.7%**	**(1,274) bps**
Combined PET	6.3%	25.6%	(1,929) bps
Integrated Oxides and Derivatives	2.3%	13.3%	(1,103) bps
Fibers	(1.6)%	3.7%	(531) bps

[1] Consolidated financials are based upon elimination of intra-company or intra-business segment transactions.

[2] Total of each segment may not always tally with consolidated financials due to elimination of Intra-company.

[3] Volumes exclude PX and ethylene being captive.

[4] Operating rates exclude Oxiteno capacity and volumes because all capacity is not available for production at the same time due to the nature of operations.

Capital Expenditure Program

Indorama Ventures expects its balance sheet and cash flow from operations to remain strong, and sufficient to meet its planned investments in future growth opportunities.

Table 3: Major Projects Update & Recycling Growth Plan

Project	Business	Expected Completion	Total Installed Capacity (KT)	Earnings & Returns	Capex in $Million
Hygiene Fibers USA	Hygiene Fibers	2H24	~20 kta	Double digit IRR	~50-55

Accounting policy

The accounting policies are adopted and applied consistently to all the periods. For more information on significant accounting policies, please refer to Note 3 of our full-year 2023 audited financial statements.

Emphasis of matters in the auditors' opinion

The auditor has drawn attention in the consolidated financial statements to Notes 12, 14, 17, and 18 Impairment assessments of cash-generating units, and Note 17 Impairment assessments of goodwill. The opinion is not modified with respect to this matter.

Performance comparison

Revenue from the sale of goods

THB in millions	FY 2022	FY 2023	Change (%)
Revenue from the sale of goods	**656,266.4**	**541,458.0**	**(17.5)%**
Add: Eliminations	27,591.0	21,649.8	(21.5)%
Adjusted revenue from the sale of goods	**683,857.5**	**563,107.8**	**(17.7)%**
Combined PET	404,956.7	328,467.4	(18.9)%
Integrated Oxides and Derivatives	147,695.7	123,646.2	(16.3)%
Fibers	131,205.1	110,994.2	(15.4)%

Revenue from sales of goods for the year ended 2023 was THB 541,458.0 million, a decrease of 17.5% from 2022. The decrease in revenue is in line with the decline in volumes, which is driven by the destocking trend, supply chain normalization, and crude oil price decline.

Combined PET revenue

Combined PET revenue for the year ended 2023 was THB 328,467.4 million, a decrease of THB 76,489.4 million, or 18.9% from 2022. This is due to the decline in volumes, mainly driven by global destocking impacts across the industry, low demand and import pressures in the EMEA region, and the mothballing of the Portugal PTA site.

Integrated Oxides and Derivatives revenue

Integrated Oxides and Derivatives revenue for the year ended 2023 was THB 123,646.2 million, a decrease of THB 24,049.4 million, or 16.3% from 2022, primarily driven by the decline in Downstream volume, which was impacted due to destocking in most of the end markets, sluggish economic activates, slower China recovery, and pressure from imports.

Fibers revenue

Fibers' revenue for the year ended 2023 was THB 110,994.2 million, a decrease of THB 20,210.8 million, or 15.4% from 2022, driven mainly by weak demand and persistent overcapacity in all markets.

Cost of Sales of Goods

THB in millions	FY 2022	FY 2023	Change (%)
Cost of sales of goods	**544,321.3**	**476,039.3**	**(12.5)%**
As a percentage of total revenues	82.9%	87.9%	

Our cost of sales for the year ended 2023 was THB 476,039.3 million, a decrease of THB 68,282.0 million, or 12.5% from 2022, which is in line with the decrease in sales revenue.

Gross Profit

THB in millions	FY 2022	FY 2023	Change (%)
Gross profit	**111,945.2**	**65,418.8**	**(41.6)%**
As a percentage of total revenues	17.1%	12.1%	

Gross profit for the year ended 2023 was THB 65,418.8 million, a decrease of THB 46,526.4 million, or 41.6% from 2022. The gross profit margin of 12.1% in 2023 decreased from the prior year mainly due to the higher variable costs and the lower Integrated PET spreads, which can be seen in the industry spread table below.

Spread or Raw Material Margins*

Amount in $ per MT	FY 2022	FY 2023
Industry spread		
Asia Integrated PET	266	161
West Integrated PET	697	384

*Selling price less raw material consumption.

Our actual geographic capacity mix also impacts our margin when compared with the industry.

Earnings before Interest Expenses, Income Taxes, Depreciation & Amortization (EBITDA)

THB in millions	FY 2022	FY 2023	Change (%)
EBITDA[1]	**83,701.1**	**39,000.6**	**(53.4)%**
Add: Inventory loss/(gain)[2]	(2,655.5)	4,001.8	
Add: Extraordinary items	(1,173.2)	1,683.7	
CORE EBITDA	**79,872.4**	**44,686.1**	**(44.1)%**
As a percentage of total revenues	12.2%	8.3%	
Add: Eliminations and others[3]	(264.5)	(843.4)	
Adjusted CORE EBITDA	**79,608.0**	**43,842.6**	**(44.9)%**
Combined PET	46,571.5	22,872.5	(50.9)%
As a percentage of total Combined PET revenue	11.5%	7.0%	
Integrated Oxides and Derivatives	25,606.8	16,650.1	(35.0)%
As a percentage of total Integrated Oxides and Derivatives revenue	17.3%	13.5%	
Fibers	7,429.6	4,320.0	(41.9%)
As a percentage of total Fibers revenue	5.7%	3.9%	

(1) EBITDA is calculated from sales revenue adding net foreign exchange gain (loss) and other income, then deducting cost of sales, selling & administrative expenses (excludes depreciation & amortization), management benefits expenses, and adjusting by extraordinary items. Excluding feedstock price adjustments for captive sales to PET on freight savings. There are no impacts on regional or consolidated EBITDA

(2) Inventory gains (losses) are the gains or losses on the inventories that Indorama Ventures carries every month, due to the movement in the prices of finished products and raw materials following market movements.

(3) Eliminations and others include the amounts attributable to intra-group transactions and the EBITDA of holding companies.

Core EBITDA for the year ended 2023 was THB 44,686.1 million, a decrease of THB 35,186.3 million, or 44.1% as follows:

Combined PET Core EBITDA

Combined PET Core EBITDA for the year ended 2023 was THB 22,872.5 million, a decrease of THB 23,699.0 million, or 44.9% from 2022, driven by the compressed margin due to reduced integrated PET margins in China, lower freight rates, PET capacity expansion in China, and higher feedstock costs due to widened disparity in aromatics pricing.

Integrated Oxides and Derivatives Core EBITDA

Integrated Oxides and Derivatives Core EBITDA for the year ended 2023 was THB 16,650.1 million, a decrease of THB 8,956.6 million, or 35.0% from 2022, driven by the drop of integrated MEG spread and the drop of Downstream spreads due to destocking across the board for premium margin products, and import pressure for commodities.

Fibers Core EBITDA

Fibers Core EBITDA for the year ended 2023 was THB 4,320.0 million, a decrease of THB 3,109.7 million, or 41.9% from 2022. This resulted from the weak demand, persistent overcapacity in all markets, and lifestyle margin compression.

Other Revenue

THB in millions	FY 2022	FY 2023	Change (%)
Finance income	946.8	1,182.6	24.9%
Net foreign exchange gain/(loss)	976.1	(466.5)	(147.8)%
Other income	8,335.4	5,091.1	(38.9)%
Total	**10,258.2**	**5,807.2**	**(43.4)%**

Finance income

Finance income for the year ended 2023 was THB 1,182.6 million, an increase of THB 235.9 million, or 24.9% from 2022. This was mainly due to an increase in current investments and interest rate during the year.

Net foreign exchange loss

There was a net foreign exchange loss for 2023 of THB 466.5 million, which equals 0.1% of net revenue. Currency volatilities are also hedged in a natural way due to our global presence, for example, USD assets are hedged naturally against USD liabilities.

Other income

Other income for the year ended 2023 was THB 5,807.2 million, a decrease of THB 4,451.0 million, or 43.4% from 2022. This was mainly due to the decrease in insurance claim and license income. Please refer to Note 26 – Other Income, in the Audited Financial Statements for further details.

Expenses

THB in millions	FY 2022	FY 2023	Change (%)
Distribution costs	36,701.7	28,439.0	(22.5)%
Administrative expenses	25,714.3	29,730.0	15.6%
Management benefit expenses	478.9	574.4	20.0%
Total	**62,894.9**	**58,743.4**	**(6.6)%**

Total expenses for the year ended 2023 was THB 58,743.4 million, a decrease of THB 4,151.5 million, or 6.6% from 2022, because of the decrease in distribution costs, which is in line with the declined revenue.

Impairment loss of property, plant and equipment, goodwill and other intangible assets

Indorama Ventures recorded an impairment amount of THB 10,727.0 million in 2023 and THB 8,645.1 million in 2022, an increase of THB 2,081.8 million. This resulted from the non-cash impairment of Corpus Christi assets, which is due to escalating project cost, labor shortages, and reduced fair market value. The project is currently on hold until we

identify an optimized project execution plan in consultation with partners to control the overall project cost.

Research and development (R&D) expenses

Indorama Ventures has a robust R&D platform with 27 centers for innovation around the world. We are strongly committed to providing innovative solutions to our customers and focusing on an agenda geared to sustainability. We have many high value-added businesses which require R&D, and as a result, we have a strongly-focused approach to innovation. In 2023, Indorama Ventures spent THB 1,305.5 million (2022: THB 1,457.3 million) on R&D.

Finance costs

Finance costs for the year ended 2023 was THB 15,367.2 million, an increase of THB 4,872.0 million from 2022, which is in line with an increase in overall interest-bearing liabilities, together with a higher interest rate during the year.

Reversal of expected credit loss

Indorama Ventures recorded a reversal of expected credit loss amount of THB 6.2 million in 2023. This is due to the decrease in allowance for expected credit loss of accounts receivables and other receivables.

Share of net profit (loss) of associate and joint ventures

Indorama Ventures had a share of net profit of associate and joint ventures of THB 8.3 million for the year ended 2023, and a share of net loss of associate and joint ventures of THB 22.8 million for the year ended 2022. A net increase was due to an increase of share of profit in ES Indorama Ventures (Suzhou), PHP (Pingdingshan), and PHP (Shanghai), offset with a decrease of share profit in ES FiberVisions, ES Indorama Ventures Rayong, and Toyobo Indorama Advanced Fibers. Please refer to Note 11 – Investments in Associate and Joint ventures, in the Audited Financial Statements for further details.

Tax income

Tax income for 2023 was THB 2,683.8 million. This was driven by deferred tax assets from the impairment of Corpus Christi assets.

Net Profit (loss)

THB in millions	FY 2022	FY 2023	Change (%)
Net profit (loss)	**34,330.2**	**(10,913.3)**	**(131.8)%**
As a percentage of total revenues	5.2%	(2.0)%	
Profit (loss) attributable to:			
Owners of the Company	31,006.1	(10,797.9)	(134.8)%
Non-controlling interests	3,324.1	(115.4)	(103.5)%

Net loss for the year ended 2023 was THB 10,913.3 million, a decrease of THB 45,243.5 million, or 131.8% from 2022, due to a decrease in industry margins across the business and volumes drop from weak demand due to destocking trend, supply chain normalization, and decrease in crude oil price. Please refer to the explanation of EBITDA above for more details. Net profit for the period included extraordinary items, i.e., gain on bargain purchase, acquisition costs, and related transaction expenses incurred on completed acquisitions. These non-recurring items are not from the normal operations of the business.

Financial position

Indorama Ventures closely monitors the financial position and any changes of various businesses at the group level. An analysis of the financial position is presented below:

Total assets

As of 31 December 2023, and 2022, Indorama Ventures had total assets of THB 590,132.0 million and THB 623,878.4 million, respectively. The decrease of 5.4% was mainly due to lower inventory, which were impacted from heavily destocking across the value chain. The major assets are as follows:

Trade accounts receivable

As of 31 December 2023, and 2022, Indorama Ventures reported trade accounts receivable of THB 51,113.5 million and THB 55,580.3 million, respectively, representing 8.7% and 8.9% of total assets.

The risk management committee has established a credit policy under which each new customer is analyzed individually for creditworthiness before the Group's commercial terms and conditions are offered. The Group's review includes external ratings, if they are available, financial statements, credit agency information, industry information, and in some cases, bank references. Sale limits are established for each customer and reviewed periodically. Any sale exceeding those limits requires approval from the risk management committee.

The following table provides information about the exposure to credit risk and ECLs for trade accounts receivables.

THB in millions	Consolidated financial statements	
	31 December 2022	31 December 2023
Within credit terms	47,465.8	42,967.3
Overdue:		
Less than 3 months	6,242.8	6,533.4
3-6 months	1,412.5	1,510.9
6-12 months	574.7	148.3
Over 12 months	746.0	765.3
Total	**56,441.8**	**51,925.2**
Less: allowance for expected credit loss	(861.6)	(811.7)
Total	**55,580.3**	**51,113.5**

Inventories

As of 31 December 2023, and 2022, Indorama Ventures reported inventories of THB 96,656.6 million and THB 115,872.3 million, respectively, representing 16.4% and 18.6% of total assets. The decrease in inventories is the result of the impact from destocking across the value chain.

Investment in associate and joint ventures

As of 31 December 2023, and 2022, Indorama Ventures reported investments in jointly-controlled entities of THB 3,798.8 million and THB 3,729.1 million, respectively, representing 0.6% and 0.6% of total assets. The slight increase is mainly the result of additional investment in joint venture for IDVB Recycling during the year. Please refer to Note 11 – Investment in associate and joint ventures, in the Audited Financial Statements for further details.

Property, plant, and equipment (PPE)

As of 31 December 2023, and 2022, Indorama Ventures reported property, plant, and equipment of THB 312,392.9 million and THB 320,630.1 million, respectively, representing 52.9% and 51.4% of total assets. The main decrease is the result of a recorded impairment loss on property, plant, and equipment, and intangible assets, Corpus Christi, which is currently under construction and is in the combined PET segment, amounting to THB 10,724.2 million. Please refer to Note 12 - Investment in joint operation and Note 14 – Property, plant, and equipment, in the Audited Financial Statements for further details.

Intangible assets other than goodwill

As of 31 December 2023, and 2022, Indorama Ventures reported intangible assets of THB 34,672.3 million and THB 34,684.5 million, respectively, representing 5.9% and 5.6% of total assets. There is no significant change in Intangible from last year. Please refer to Note 18 – Other Intangible Assets, in the Audited Financial Statements for further details.

Loans to related parties

Indorama Ventures has given certain loans to related parties as per Note 5 – Related Parties, in the Audited Financial Statements. There are various strategic reasons given and as of 31 December 2023, these amounts are not material.

Total liabilities

As of 31 December 2023, and 2022, Indorama Ventures reported total liabilities of THB 412,064.0 million and THB 422,993.0 million, respectively. The decrease in total liabilities mainly resulted from a decrease in account payables and current portion of long-term loans from financial institutions.

Trade accounts payable

As of 31 December 2023, and 2022, Indorama Ventures had trade accounts payable of THB 101,934.9 million and THB 106,720.7 million, respectively. The decrease in trade accounts payable is in line with a decline in revenue from sales of goods, together with working capital management. The payment days increased from 65.3 days for the year ended 31 December 2022, to 78.9. days for the year ended 31 December 2023.

Interest-bearing liabilities

As of 31 December 2023, and 2022, Indorama Ventures reported interest-bearing liabilities of THB 254,332.0 million and THB 254,313.3 million, respectively, representing 43.1% and 40.8% of total liabilities and shareholders' equity.

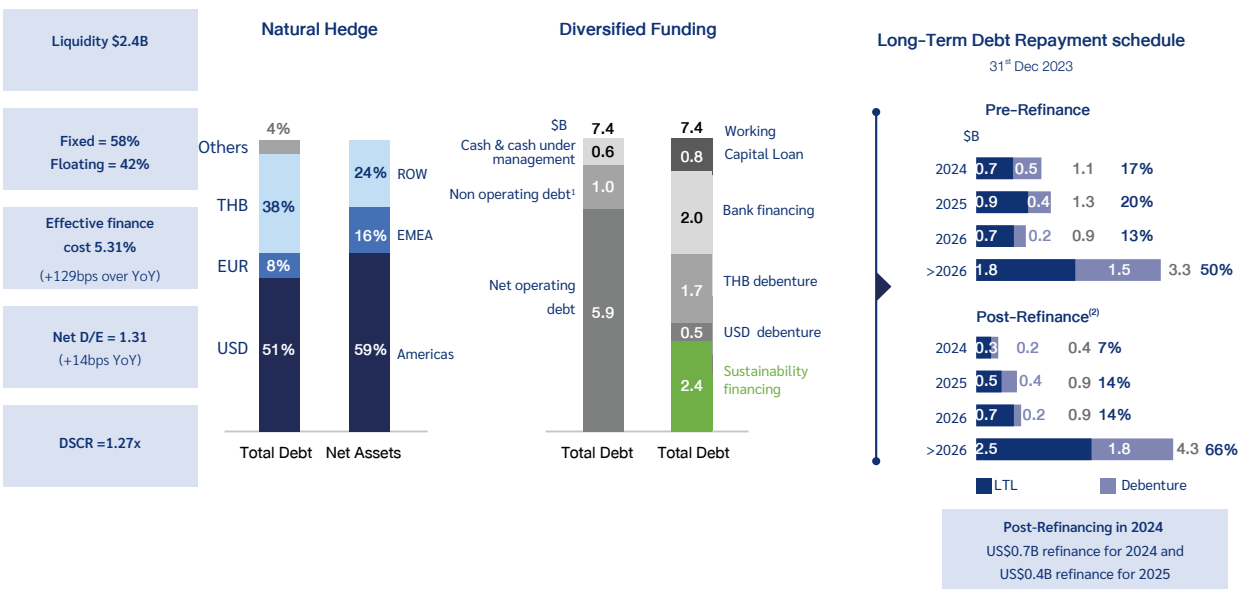
Our net operating debt to equity increased from 0.96 times at the end of 2022 to 1.13 times at the end of 2023, after spending on capex and investments of THB 26,184.1 million in 2023, which was primarily from capacity expansion and maintenance. Indorama Ventures' net operating debt slightly increased from THB 192,893.6 million at the end of 31 December 2022, to THB 201,344.1 million at the end of 31 December 2023.

The table below describes total debt and net operating debt in THB billions:

THB in billions	31-Dec-22	31-Dec-23
Total debt	**254**	**254**
Bank overdraft and short-term loans	31	28
Long-term debt (current portion)	31	25
Debentures (current portion)	5	16
Long-term debt (non-current portion)	111	114
Debentures (non-current portion)	76	71
Cash and cash under management	**22**	**20**
Cash and cash equivalents	21	19
Current investments and loans given	1	2
Net debt	**233**	**234**
Non-operating debt (project debt)	40	33
Net operating debt[(1)]	**193**	**201**
Net debt to equity (times)	1.16	1.31
Net operating debt to equity (times)[(2)]	0.96	1.13
Debts with fixed interest %	63%	58%
Credit rating by TRIS	AA-	AA-

(1) Net debt after debt for capex and investments in progress that is not generating revenue and earnings as on the date given.

The graph below provides the repayment schedule for long-term debt and debentures in $ billions:



Data as of 31 Dec 23

1 Includes various projects underway which are not yet completed and have not yet started contributing to the earnings

2 Post-Refinancing in 2024 in progress

Shareholders' equity

As of 31 December 2023, and 2022, Indorama Ventures reported shareholders' equity of THB 178,067.9 million and THB 200,885.4 million, respectively. The decrease in shareholders' equity was mainly due to a decrease in retained earnings resulting from the profitability of the Company. Please refer to "Statement of Changes of Equity" in the Audited Financial Statements for more details.

Cash flow

Indorama Ventures generated THB 53,133.7 million in cash flow from operating activities in 2023, compared to THB 77,981.1 million in 2022. The decrease in cash flow from operating activities was due to the significantly decreased profit (loss) for the year.

Cash flow used in investing activities of THB 25,653.2 million in 2023 was primarily paid towards the acquisition of Tollegno, wool business in Europe and UCY Polymers, PET recycling assets in Czech Republic in 2022, with some part paid in 2023. Capex and investments were funded by a mix of long-term loans and cash flow from operations.

Cash flow used in financing activities of THB 28,909.5 million in 2023 was principally a result of repayment that was used to support business growth and paid for finance costs due to higher effective finance costs compared to 2022.

Liquidity

Strong cash flow from operations and a longer average loan maturity led to a high liquidity position for the Company. As of December 2023, Indorama Ventures had liquidity of THB 82,733.7 million, in the form of cash and cash under management, plus unutilized banking credit lines. This high liquidity provides us with greater flexibility in our business operations and allows us to finance accretive growth opportunities.

Key financial ratios

Current ratio

Our current ratio is calculated by dividing total current assets by total current liabilities. The current ratio stands at 0.9 times at the end of 2023, decreased from 1.1 at the end of 2022. The slight decrease in current ratio was mainly due to a decrease in ending inventories from heavily destocking across the value chain.

Return on equity ratio (ROE)

Our ROE ratio is calculated by dividing our profit attributable to owners of the Company for the period by the average of the total equity attributable to equity holders of the Company. Indorama Ventures' ROE of -6.2% in 2023 decreased compared to 18.0% in 2022. Indorama Ventures' core ROE is 1.0% in 2023 compared to 21.7% in 2022, as a result of a significant decrease in EBITDA and net profit compared to the prior year.

Note: For the core ROE% calculation, we use the formula as follows: Core profit attributable to owners of the Company after interest on perp/average of the equity attributable to shareholders of the Company.

Return on assets ratio (ROA)

Our ROA ratio is calculated by dividing profit before finance costs and income tax expenses by the average total assets. For the year ended 2023, and 2022, our ROA ratio was -1.8% and 5.9%, respectively. Indorama Ventures' core ROA of 2.8% in 2023 compared to 9.5% in 2022, decreased in line with a decline in core net profit.

Note: For the core ROA% calculation, we use the formula as follows: Core profit before interest and tax expenses/average of the total assets of the Company.

Net debt-to-equity ratio (D/E)

Our net interest-bearing debt-to-equity ratio is calculated by dividing our interest-bearing liabilities less cash and cash equivalents by total shareholders' equity. As of 31 December 2023, and 2022, our net interest-bearing debt-to-equity stood at 1.4 times and 1.2 times, respectively. The Company raised cash through additional loans from financial institutions, which was used in ongoing expansions, and working capital needs. However, the debt covenant for most of the debts is net debt to equity of at least two times.

Debt servicing coverage ratio (DSCR)

Our DSCR is calculated by dividing core EBITDA by annual interest and principal payments on debt. As of 31 December 2023, and 2022, our DSCR was at 1.3 times and 2.5 times, respectively. The decrease came from a significant decrease in EBITDA.

Our DSCR is still in a good range which indicates that operations-generated income is sufficient to cover outstanding debt payments during the year. However, the debt covenant for most of the debts is at 1.1 times DSCR.

Risk Factor and Risk Management

Geopolitics

- ### Geopolitical instability

  We operate in more than 30 countries and the diverse locations of our business activities expose us to a wide range of geopolitical developments, including varying degrees of change in social, economic, and operating environments. We seek to manage the impact of these changes by monitoring the geopolitical landscape in the countries where we have operations, through the development and maintenance of relationships with government agencies and stakeholder partnerships. When necessary, we thoroughly monitor developments and implement plans to reduce the impact on Indorama Ventures.

Technology

- ### Development and deployment of new technologies that provide new products and solutions

  Failure to effectively develop and deploy new technology and products may have an adverse effect on our ability to respond to environmental, social, and governance expectations, impacting the implementation of the business strategy and licenses to operate. We work across business segments to effectively determine the scope and budget for developing new technology that supports our activities, as the costs of new technology is difficult to estimate. We are committed to meeting regulatory, societal, and investor expectations with regards to addressing climate change. We are leaders in partnering with evolving technology companies, regulators, customers, and brand owners to develop the next-generation technology for advanced recycling and driving innovative recycling campaigns.

Our future performance depends on the successful development and deployment of new technologies in our manufacturing operations. We are accelerating our digital transformation in manufacturing, broadening its scope to better integrate commercial and supply chain functions. We have dedicated teams focused on utilizing machine learning and other aspects of artificial intelligence that can add performance value.

- ### Information and operational technology systems in our businesses

  Deterioration in the cybercrime environment is represented by an increase in the number and sophisticated nature of financially and industry-driven attacks, exacerbated by current geopolitical instability. We seek to manage exposure to cyberattacks by implementing internationally-recognized standards and industry-specific standards for information security and information technology management. We drive cyber awareness, shape desired behaviors, and embed new ways of working to continuously mitigate cybersecurity breaches and attacks.

Competition and market

- ### Maximize profitability across the business value chain

  Our ability to achieve strategic objectives depends on how we react to market conditions, price fluctuations, raw material supply reliability, and intensifying competition. We continually assess the markets and the underlying economic, political, social, and environmental drivers to evaluate changes in competitive forces. We leverage integration and diversification of our manufacturing facilities across geographies, product diversification, and other operational excellence measures to achieve competitiveness through commercial success.

Operations

- ### Environmental, health, safety, and process safety

  The nature of our industry includes operations that can expose us to wide-ranging environmental, health, and safety risks.

  We follow our Environmental, Health, and Safety management system, helping us to manage these risks and drive performance improvements globally. It sets out defined requirements through comprehensive standards, used to govern important risk management activities such as asset inspection, maintenance, testing, and emergency management, based on industry recognized best practices and related competency development needs. We deliver an independent audit of the management system through a multi-year program.

Human capital

- ### Our performance depends on the successful development and future deployment of people

  The inability to attract, develop, and retain people with the necessary skills and capabilities can impact successful strategic delivery.

  We successfully recruit, develop, and retain people, investing in our value proposition and working in collaboration with universities and their internship programs around the world. With diversity, equality, and inclusion at our core, we continue to drive various capability and development programs, including our Management Leadership Program and Young Talent Program.

Climate change

- ### Climate-change-driven legal and regulatory measures and falling demand in our products

  Exposure to changes in legal and / or regulatory requirements could potentially result in project delays or cancellations, operating restrictions, and additional compliance obligations.

  We are committed to protecting the environment, fully complying with applicable environmental laws and regulations wherever we have operations. We routinely monitor potential regulatory changes, continue to focus on efficiency improvements, and adhere to GHG reduction goals and targets as defined and disclosed in our Sustainability Reports. We participate in best-in-class benchmarking assessments, recognized for their independent reporting on sustainable business practices, which is critical to generating long-term shareholder value and aligning our decarbonization strategy.

- ### Climate-change-driven energy transition

  We experience exposure to the effects of energy transition and the associated fluctuation in energy supply and market conditions. We constantly monitor market conditions, deploying our energy cost hedging policy to mitigate fluctuation. We will continue to seek opportunities through energy transition to increase our use of renewable energy, further reduce our carbon footprint, and maintain contingency plans for temporary energy supply rationing.

- ### Physical effects of climate change on operations

  Exposure to the adverse effects of the changing climate with increasing variations in seasons, temperature, sea levels, and fluctuations in water levels is adversely affecting our operations We are committed to sustainable water management, complying with applicable environmental laws, and international standards and regulations wherever we have operations. We routinely monitor potential regulatory changes, evaluate water risks and opportunities, identify water stress locations, and work with agencies and authorities to understand water supplies to avoid potential conflicts with the societies in which we operate.

Strategy risk

- ### Major project delivery

  Failure to invest in and successfully deliver major projects may affect our performance. Our dedicated Project Cells retain market-leading commercial, technical, and legal expertise and are deployed to major projects as they arise.

- ### Integration liabilities from mergers and acquisitions

  Newly-acquired businesses may lead to increased costs, operational disruption, and inefficiencies, reducing the overall value of the deal. Our dedicated Integration Management Office oversees the entire process to merge operations and systems.

- ### Risk of compliance with debt covenants

  Indorama Ventures and its subsidiaries have entered into financing agreements for debt funding in the form of bonds, debentures, bilateral loans, syndicated loans, and others which carry financial and non-financial covenants for compliance on a periodic basis. The covenants are monitored, reviewed, and reported to the relevant stakeholders internally, and to the external financial stakeholders. Actions are taken to remedy non-compliance or to seek waivers from the external financial stakeholders to which operational and financial information is provided. Furthermore, during financial planning for growth and investments, a review is conducted to ensure adherence to the covenants and allow for sufficient headroom to cover fluctuations in operational and financial performance.

- ### Risk category: Finance

  Indorama Ventures and its subsidiaries have a total outstanding debt of THB 254.31 billion at the end of 2022. The total outstanding debt includes bank overdrafts, short-term loans, long-term loans, debentures/bonds, and financial lease liabilities. The net debt-equity ratio at the end of 2022 is around 1.16 times, compared to what is required under financial covenants of equal to or less than 2.00 times. The financial position has strengthened over the years with a larger equity base and increase in cash flow from operations. The total shareholders' equity at the end of 2022 is THB 200.89 billion (including perpetual debentures of THB 14.90 billion). In addition, syndicated bank loans at regional level and subsidiaries that have standalone financing are required to meet financial obligations and comply with financial covenants. In October 2023, the domestic credit rating of Indorama Ventures was re-affirmed at AA- by TRIS. Indorama Ventures aims to sustain a business and financial profile that maintains or enhances its credit rating profile.

Business Drivers for Sustainability

Sustainability Overview

ESG Governance

We ensure that our activities are valuable for us and our stakeholders, so the ESG governance body is enhancing its supervision over different aspects of ESG, especially regarding environmental and social aspects. These include decarbonization, water stewardship, and waste management, not only in our own operations, but also in value chain. Social aspects include health and safety, diversity, and labor practices.

The Sustainability and Risk Management Committee (SRMC), a subcommittee of the Board, comprises seven members of the Board, including three Independent Directors. Members of the SRMC, with their in-depth knowledge and vast expertise in sustainability and risk management, ensure effective governance and oversight of sustainability and risk management by establishing and reviewing the company's sustainability and risk management policies, strategies, and objectives, ensuring their alignment with the company's vision, mission, and values. The committee also monitors and evaluates the company's performance and progress on sustainability and risk management issues, such as environmental, social, and governance (ESG) factors, compliance, ethics, and reputation. The committee advises and supports the board of directors and the executive management team on sustainability and risk management matters and engages with relevant internal and external stakeholders to enhance the company's sustainability and risk management practices and disclosure. The committee meets at least quarterly and invites relevant executives and external experts to attend as appropriate. The committee's performance is evaluated annually by the Board.

ESG Council: In addition to the SRMC, we also have an ESG Council consisting of 15 permanent members with a strong focus on decarbonization and other key environmental, social, and governance criteria. More details on our ESG governance structure, and roles and responsibilities are provided on the website.

Highlights of 2023:

Throughout the year, the SRMC and ESG Council focused on addressing sustainability risks, including greenhouse gas (GHG) reduction, energy management, climate change adaptation, and supply chain management, while implementing the necessary mitigations. Further details are provided in the SRMC Report to Stakeholders on our website.

Compliance with Sustainability and ESG Regulations, and International Guidelines and Standards

Indorama Ventures is committed to aligning its ESG strategy with regulations, global standards, and guidelines. Since 2020, there have been dynamic changes in sustainability-related regulations to respond to the growing demand for more sustainable business practices. The EU and US have enacted new ESG regulations that set higher standards and expectations for reporting by the private sector on environmental, social, and governance issues. These regulations aim to enhance the credibility, comparability, and relevance of sustainability disclosures, as well as to facilitate the integration of ESG factors into investment decisions and risk management.

Indorama Ventures aligned its reporting and disclosure with emerging global standards and regulations by preparing and publishing the company's sustainability and risk management reports in accordance with the requirements of the EU CSRD, EU Taxonomy, and the US IFRS Standards as its reporting frameworks, in addition to GRI, ISSB, and other standards which are being complied with currently. We also ensure that the company's reporting and disclosure practices are transparent, consistent, and relevant for its stakeholders, and reflect the company's sustainability and risk management performance, impacts, and contributions to the UN Sustainable Development Goals (SDGs). We also undertake assurance and verification processes to enhance the credibility and reliability of our reporting and disclosure.

Moreover, the Company voluntarily adheres to GHG Protocol standards and reports its Scope 1, 2, and 3 emissions in accordance with the TCFD recommendations, while actively monitoring and preparing for the EU Carbon Tax, EU Plastic Tax, and Carbon Border Adjustment Mechanism (CBAM), alongside setting targets to reduce our carbon footprint, and supporting the transition to a low-carbon economy.

Highlights of 2023:

Indorama Ventures has taken a proactive approach in complying with the requirements of the EU CSRD, EU Taxonomy, and the US IFRS Standards even though these are applicable from FY 2025.

Stakeholder Engagement

Indorama Ventures prioritizes addressing the needs and expectations of all stakeholders in a respectful manner, recognizing their fundamental rights. Through active engagement, the company incorporates stakeholder input to evaluate key sustainability issues, positively influencing company decision-making. This approach aims to build trust and create value between stakeholders and Indorama Ventures, ultimately contributing to the organization's sustainability and ongoing growth.

Indorama Ventures has a Stakeholder Engagement Guideline that was developed in accordance with AA1000 standards and is in line with the Stakeholder Policy. The objective of this guideline is to strengthen the identification and prioritization steps that will enable the enhancement of appropriate approaches with stakeholders in addition to existing channels. Furthermore, it helps enhance the overall efficacy of stakeholder management and supports the double materiality approach in compliance with EU CSRD regulations.

Highlights of 2023:

Following this guideline, the top three prioritized stakeholder groups were identified as employees, customers, and suppliers. By actively involving these stakeholders in decision-making processes, Indorama Ventures aims to foster a collaborative and mutually beneficial relationship, aligning with its commitment to sustainability and continuous growth. Details of stakeholders and engagement channels are available on the website.

Industry Associations and Memberships

Advocacy at Indorama Ventures

In 2022, Indorama Ventures joined the Thai government's Action Plan on Plastic Waste Management (2023-2027). The working group included both the public and private sectors to guide circular plastic management and offer recommendations for international negotiations. Indorama Ventures' collaboration ensured our alignment with Thai government policy.

We participated in events at COP28, hosted by the United Nations Framework Convention on Climate Change in Dubai, where our commitment to innovation, technology, and sustainable business practices was highlighted at the Thailand Pavilion, showcasing our contributions to the global net-zero target.

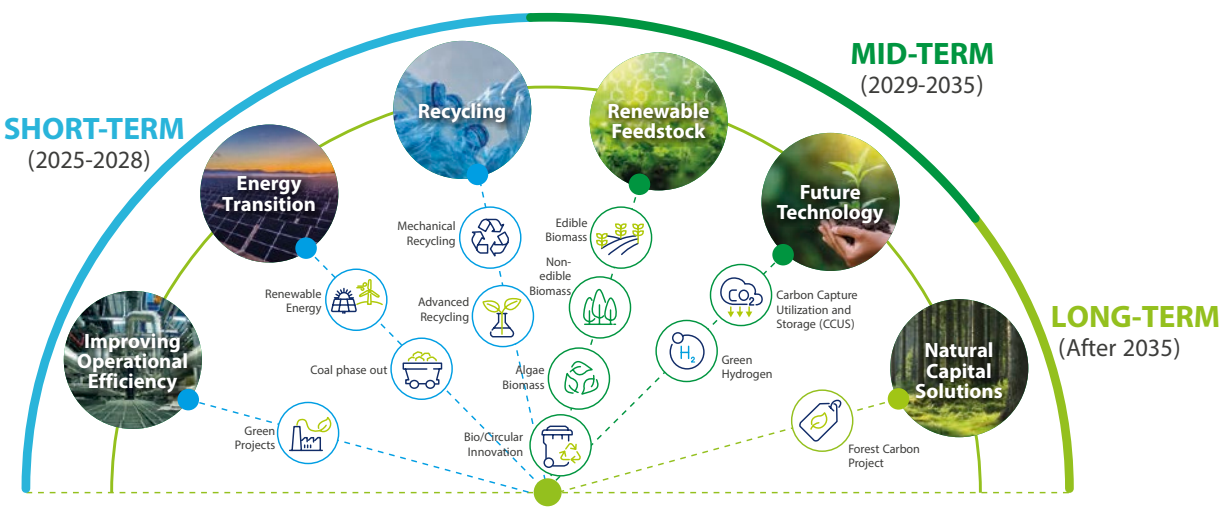
In the US, there was significant legislative activity at the state level to increase collection for recyclable materials. Although no new bills were passed in 2023, twelve states introduced, and some held hearings on Extended Producer Responsibility (EPR) schemes, establishing important legislative groundwork for 2024 and 2025. At the federal level, the Environmental Protection Agency solicited constituent feedback on their National Strategy to Prevent Plastic Pollution, including improving post-use material management. This will be the instrument used by the Biden administration to implement policies to reduce, reuse, and collect plastic waste. In addition, the Federal Trade Commission solicited comments to update the "Green Guides," which establish regulations guiding labeling and general environmental benefit claims. Differentiating fully recyclable PET packaging from other polymer types is key to demonstrating that recycling works when collection infrastructure is in place.

While many countries in Latin America have regulations in place requiring minimum recycled content in plastic packaging (such as Colombia, Costa Rica, Bolivia, Chile, and Argentina), as well as recycling refund systems, 2023 saw little progress with Circular Economy legislation in major markets like Brazil and Mexico. Both countries have communities that supplement their income by collecting beverage packaging, but have yet to require minimum recycled content in packaging. The importance of Circular Economy legislation lies in ensuring that the minimum recycled content requirements are derived from locally sourced feedstock to prevent dumping and sustain local communities.

In 2023, the European Commission proposed a new Green Claims Directive to prevent companies from making misleading claims about environmental benefits of their products. The Commission also proposed revising its packaging waste legislation with mandatory Deposit Return Systems from 2029, higher plastics recycled content targets (65% by 2040 for beverages), and refill quotas, which are currently under negotiation. After a thorough investigation, the European Commission imposed provisional anti-dumping duties on imports of virgin and recycled PET from China, with a decision on definitive measures expected in May 2024.

In 2023, Indorama Ventures participated in two UNEP meetings on negotiations toward a global plastic pollution treaty, highlighting the circularity of PET and the need for Extended Producer Responsibility schemes, a global design for recycling guidelines, and aligned regulations to avoid regulatory divergence.

Driving a Decarbonized Future



In 2023, Indorama Ventures stayed committed to our six-pronged decarbonization strategy, focusing on improving operational efficiency, transitioning toward cleaner energy sources, promoting recycling, utilizing renewable feedstock, and exploring future technologies such as Carbon Capture Utilization and Storage (CCUS). This strategic approach is integral to achieving our 2030 and long-term climate ambitions by significantly reducing the emission footprint

in Indorama Ventures' operations and value chain. As a leader in sustainability, we continue to expand our eco-friendly portfolio, making noteworthy progress throughout the year. Our key projects highlight the concerted efforts across the company and value chain, demonstrating our ongoing dedication to sustainability and environmental responsibility.

Improving Operational Efficiency: : We continued our focus on improving energy efficiency and invested in operational and energy efficiency projects to reduce GHG emissions, as well as water and other utilities consumption. This year has been another success in introducing green projects to support resource efficiencies, leading to cost saving and environmental benefits.

Energy Transition: We continued our efforts to decarbonize through on-site and off-site renewable electricity, and phase out coal consumption. In 2023, Indorama Ventures has an active on-site renewable project portfolio, with installations spanning across 16 sites in China, India, Indonesia, Thailand, Lithuania, the US, Italy and Egypt. This brings our combined installed capacity to 42 MW and generates 15,000 MWh of electricity. Notably, a solar farm project of 5.4 MW was completed at our Asia PET site in October 2023.

In line with our strategy to transition away from coal, we successfully converted one Hot Oil Coal Heater to natural gas in India, resulting in an estimated annual GHG saving of 35,000 tCO_2e. This marks a continued step towards our overarching goal of achieving 100% coal phase-out by 2030.

Recycling: We invest in and expand recycling facilities to enhance our recycling capacity and seek advanced technologies, which will help address the mismanagement of plastic packaging waste and reduce lifecycle carbon emissions. More details are included under our Circular Economy section.

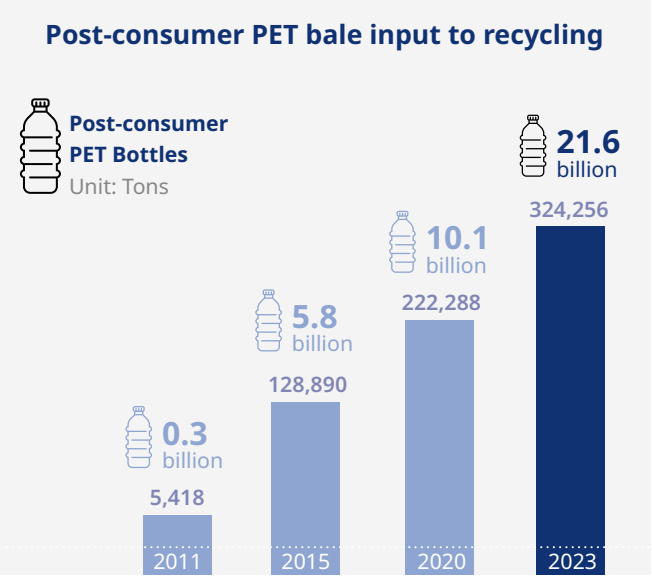
Circular Feedstock: We focus on replacing petrochemical-based feedstock with circular (bio-based and recycled) feedstock. Indorama Ventures' downstream products, such as PET and polyester-related products, have the potential to be produced from bio-renewable and circular sources. We are committed to using renewable feedstock, with more details included under our Circular Economy section.

Future Technology: We are actively pursuing innovative opportunities with our technical partners to invest in projects aimed at capturing and utilizing CO_2. Among the notable initiatives is our collaboration at the Indorama Ventures Polymers Mexico site, where we are currently exploring the capture of CO_2 from heaters, with the potential to mitigate emissions by 29,000 tCO_2e. Additionally, we are investigating carbon capture at our Port Neches site, with the potential to mitigate up to 650,000 tCO_2e annually.

Our GHG emission information is disclosed in our Sustainability Report 2023 and on our website.

Circular Economy

Recycling Progress



PET is widely recognized as one of the most sustainable packaging materials. Our recycling performance has consistently increased year-on-year, with approximately twenty billion PET bottles recycled in 2023. Over the last decade, we have invested $1 billion in establishing recycling facilities to promote the PET circular economy.

We are actively expanding our infrastructure to achieve our mission and meet the recycling ambitions of our customers. Presently, 20 recycling sites are operating in 12 countries. We aim to achieve the following recycling targets: 750 kilotons per year by 2025 and 1,500 kilotons per year by 2030. These targets also align with our commitment to the Ellen MacArthur Foundation.

We are striving to explore more advanced recycling technologies. Our collaboration with Carbios on first-world enzymatic recycling technologies helps increase the PET recycling rate in France, and generates 150 jobs. A joint effort with Evertis and AMB through a "Tray-to-Tray Recycling" program helps to move us toward our ambition to recycle 1.5 million tons of bales per year by 2030, enhancing a closed-loop economy globally.

Highlights of 2023:

Between February 2011 to September 2023, Indorama Ventures has reached the milestone of recycling 100 billion PET bottles. This achievement yielded 2.1 million tons of PET waste being diverted from the environment, reducing the carbon footprint by 2.9 million tons. In 2023 itself, more than 324 kilotons of post-consumer PET bottles were recycled, equivalent to more than 21 billion bottles.

Circular Feedstocks

We are transitioning toward circular feedstocks with the goal of sourcing one-third of our feedstock mix from sustainable sources, including bio-based feedstocks and circular feedstocks. The inclusion of the Oxiteno group has brought high value-added downstream surfactant products, as well as differentiated bio-based product offerings. In line with our 2030 circular feedstock targets.

Our holding company, Indorama Ventures Investments Holding (IVIH), continued its investments and engagements with startups and technology developers to explore bio-derived raw materials – whether for surfactants, PET, or fibers, while considering commercializing plant-derived monoethylene glycol (MEG), a raw material for PET production.

Highlights of 2023:

We invested in Polymateria, a company specializing in biodegradable materials for our Fibers business, resulting in our receiving the "World of Wipes Innovation Award" for producing biodegradable wipes and masks. We also partnered with Carbios, a bio-recycling company based in France, and collaborated with packaging companies to collectively innovate for sustainable PET products.

Sustainability Strategic Development

Double Materiality Assessment

Double materiality has emerged due to growing pressure from governments, investors, and the general public to better address the role companies play in environmental and social concerns. This strategic process identifies key environmental, social, economic, and governance topics crucial to both our business and internal / external stakeholders. Additionally, this approach has been included in the EU Corporate Sustainability Reporting Directive (CSRD), which is another driver for us in initiating the assessment in 2023 and reassessing it every two years. Stakeholder engagement helps in identifying and assessing actual and potential risks and opportunities. The process prioritizes the most significant issues, with results undergoing validation by experts.

This robust Double Materiality Assessment shapes our company narrative, aligns with stakeholder expectations, and enhances long-term value creation. The advantages lie in informed decision-making, proactive risk management, and a strengthened commitment to responsible, resilient business operations.

Highlights of 2023:

Nine material topics were identified and prioritized in terms of impact materiality and financial materiality on society, the environment, and the Company's value. They were endorsed by the SRMC for sustainability disclosure as follows:

2023 Material Topics

Economic	Environmental	Social
• Business ethics • Compliance management • Risk and crisis management • Cybersecurity	• Post-consumer PET bottles, recycling and plastic waste • Climate change and decarbonization	• Human rights • Supply chain management • Occupational Health and Safety

Human Rights

Indorama Ventures is committed to preventing human rights violations and encourages our key stakeholders throughout the value chain to adopt robust human rights standards in line with global norms, including the Universal Declaration of Human Rights (UDHR), UN Guiding Principles on Business and Human Rights (UNGP), and the ILO Declaration on Fundamental Principles and Rights at Work. Our Human Rights Policy and Responsible Sourcing Policy mandate that suppliers are accountable for managing and guaranteeing compliance of their subcontractors and vendors.

To strengthen enforcement and compliance with our Human Rights Policy, we established a Human Rights Declaration, mandating annual issuance by Site Heads and Business Heads.

To ensure adherence to our principles and promote ethical conduct, we have strengthened a Human Rights Due Diligence (HRDD) framework, conducted risk assessments following the UNGP, and evaluated both actual and potential impacts. This structured approach involves meticulous analysis, risk assessments, mitigation, and remediation, along with grievance mechanisms, allowing us to maintain elevated standards in our performance.

Highlights of 2023:

We achieved a 100% declaration signed by Site Heads and Business Heads, and as per this exercise, there were no significant issues or major violations recorded. For more comprehensive insights, please refer to Sustainability Report 2023.

Supplier Management

Indorama Ventures' Sustainable Supply Chain program was established in 2022 to manage ESG risks within our supply chain. In 2023, we engaged with suppliers, covering around 70% of direct raw material spend. Our engagement involves ensuring our suppliers comply with our Responsible Sourcing Policy and respond to our Greenhouse Gas Questionnaire. The Responsible Sourcing Policy ensures that our suppliers conform to international best practice standards in their activities regarding environmental, social, and governance dimensions. On the other hand, the Greenhouse Gas information requirements are also communicated to suppliers to disclose their climate maturity and information related to the carbon footprint of the product they supply to Indorama Ventures.

With our Sustainable Supply Chain program established, we looked at other pathways to support industry efforts on supply chain and further enhance the effectiveness of our activities. In April of 2023, Indorama Ventures joined the chemical industry initiative called Together for Sustainability (TfS). This network of 51 leading chemical companies aims to drive sustainable solutions and improve sourcing and data-sharing best practice within chemical supply chains. By joining TfS, Indorama Ventures is encouraging suppliers to meet high sustainability standards, reduce the risk of supply chain disruptions, and improve overall climate maturity.

Through this initiative, Indorama Ventures will also be partnering with EcoVadis to assess our suppliers to identify risks and opportunities along the value chain, improve sustainability practices, and encourage collaboration among members.

Customer Engagement

Ensuring customer satisfaction is fundamental to our success, driving us to continuously evaluate and strengthen our strategies for enhancing customer relationships and adapting to their evolving needs. As part of our group sustainability strategy, we conduct a biennial online survey encompassing all relevant customers across our business units. This survey is designed to gauge customer needs, expectations, and satisfaction levels with our products and services.

In our latest study conducted in 2022, our Customer Satisfaction Index (CSI) reached an impressive 84.82%, complemented by a Net Promoter Score (NPS) of 48. These results undergo thorough analysis, including benchmarking against competitors and tracking trends over time. Based on this analysis, recommendations are developed and integrated into our ongoing improvement initiatives. Our commitment remains to consistently exceed customer expectations, thereby promoting enduring relationships built on trust in our products.

Highlights of 2023:

In 2023, we were honored to receive awards from distinguished customers, including the Pirelli Supplier Excellence Award, the Nitto ATP Finals Supplier Award, and the ThaiBev Honorary Business Partner Award. These achievements underscore our dedication to excellence and our unwavering commitment to providing outstanding products and services to our valued partners. We continue to maintain the highest standards of quality and performance across all aspects of our operations.

Customer Satisfaction Index (CSI)			
Indorama Ventures – 84.82%	PET – 85.98%	Fibers – 84.15%	IOD – 84.11%
Recycling – 83.96%	Packaging – 82.79%	Feedstock – 84.96%	Wool – 83.32%

Biodiversity

Indorama Ventures is committed to understanding and mitigating the consequences of its business activities on ecosystems and nature. The Company is sharply focused on measuring and transparently reporting its environmental impact, proactively managing risks, and continually enhancing its sustainability performance. Moving forward, Indorama Ventures pledges that any future production sites will adhere to the mitigation hierarchy and remediate any significant impacts on biodiversity loss within our ecosystem. Multiple tools were used for the risk assessment, including ENCORE (Exploring Natural Capital Opportunities, Risks, and Exposure), IBAT (Integrated Biodiversity Assessment Tool), and the WWF Biodiversity Risk Filter to assess impacts on nature, together with dependencies, risks and opportunities, Protected Areas (PAs), Key Biodiversity Areas (KBAs), the IUCN Red List of Threatened Species, and physical risks.

Highlights of 2023:

The first biodiversity risk assessment was conducted across all 148 sites of our operations. The results identified priority sites in seven countries (Italy, Austria, France, Germany, Spain, Philippines and Indonesia) associated with potential biodiversity risk impact, and we will utilize this information to develop our action plan in the next phase.

Consequently, we developed our first biodiversity report following the recommended disclosures from the Taskforce on Nature-Related Financial Disclosure (TNFD). The TNFD Report is available on our website to provide detailed analysis results.

Sustainability Communications

Advancing a Sustainability Culture through the Sustainability Academy

With our ambitious sustainability strategy, it is imperative that Indorama Ventures builds a sustainability culture throughout our company to effectively cascade action. In addition to continuous knowledge sharing through various means and platforms such as internal and external webinars, the Sustainability Academy, an online learning platform for Indorama Ventures' global colleagues, was launched in September 2023

to enable systematic knowledge sharing on sustainability, from the basics to advanced concepts and how it relates to our company and our value chain partners (UN SDGs, customers, suppliers, bankers, ESG funds, and financial institutions).

At its launch, the Sustainability Academy was targeted at our Group Management Council (GMC) members as leaders within our company. Beyond this leadership level, the Sustainability Academy will target specific functions and launch an additional five courses including Climate Adaptation in 2024.

Highlights of 2023:

Five courses were developed: 1) Sustainability Fundamentals; 2) Sustainability Drivers; 3) Biodiversity Fundamentals; 4) Corporate Sustainability; and 5) Sustainability Data. More than 146 learning hours were completed by approximately 50% of GMC members who were trained.

Awards and Recognitions

Indorama Ventures engages in several external sustainability ratings and awards to engages our sustainability leadership position and identify opportunities for improvement in our business operations. These rating agencies also guide us toward new and broader topics to focus on, provide us with a global perspective, and help us continuously improve.

This year, we participated with globally recognized agencies and national organizations, such as the S&P Global Dow Jones Sustainability Indices (DJSI), CDP, FTSE4Good, MSCI, Sustainalytics, EcoVadis, ChemScore, and the Stock Exchange of Thailand (SET), among others. We are honored by the awards we received in 2023 for our sustainability efforts.

Our achievements and recognitions not only increase stakeholder trust and confidence in the effectiveness of our sustainability-driven business operations, but also underscore our substantial progress in ESG initiatives, reinforcing our steadfast commitment to sustainability.

These successes result from our strong teamwork, involving collaborations throughout the company, from management levels to all employees. Learn more about Indorama Ventures' sustainability awards and recognitions.

Highlights of 2023:

PLATINUM Top 1% ecovadis Sustainability Rating JAN 2024

Attained 99th percentile among assessed basic chemical companies

Member of Dow Jones Sustainability Indices Powered by the S&P Global CSA

Listed in the DJSI World and Emerging Markets for the 5th and 7th consecutive year respectively in the Chemicals sector.
Indorama Ventures was ranked in the 92nd percentile

MSCI

Achieved an "A" rating for the first time in 2023

FTSE4Good

#1 in the FTSE4Good Index Series (ESG score: 4.5 out of 5)

SUSTAINALYTICS

Achieved an ESG rating in the 12th percentile in the Chemical Industry Sector (lower percentile indicates better performance) among 563 companies

CDP DISCLOSURE INSIGHT ACTION

Achieved a "B" rating for Climate Change Management and a "B-" rating for the first year of assessment on Water Security

chemsec CHEMSCORE

Achieved a B- ranking, Rank = 2 in the 2023 ChemScore assessment, among 50 global chemical companies.

SET AAA ESG Ratings 2023

Achieved a total score of 80 with an AA grade, surpassing the "Industrials" group's average score of 67 for companies with a market cap beyond THB 100B

Sustainability Disclosure Award 2023 for the fifth consecutive year

Winner of the 'Best Environmental Corporate Approach Award' and recipient of the 'Appreciation Award' - Thai Investors in the Netherlands from the Netherlands Chamber of Commerce (NTCC)

Value Protection and Creation

Our business aims to optimize the use of resources and generate meaningful outcomes from different activities in our value chain. To succeed and grow in the current business environment, ESG and sustainability factors are essential for protecting and creating value.

Value Protection

Improving operational efficiency

By adopting circular economy principles; maximizing resource efficiency; minimizing the consumption of energy, raw materials, and other inputs; minimizing waste; resorting to low carbon intensive energy at high-emissions sites; and exploring technologies to capture emissions.

Complying with regulations and anticipating future trends and challenges

By adhering to the relevant laws, regulations, and standards in all the markets where the company operates, such as EU Carbon Tax, EU Plastic Tax, Carbon Border Adjustment Mechanism (CBAM), the EU CSRD regulations, as well as US IFRS and more stringent emissions regulations in the U.S.; and by proactively identifying and addressing the potential impacts and opportunities arising from the changing business environment, such as climate change, digital transformation, and social responsibility.

Reducing risks and enhancing resilience

By ensuring the continuity and reliability of the company's operations in the face of various internal and external challenges, such as natural disasters, cyberattacks, supply chain disruptions, market volatility, or regulatory changes.

Maintaining good relationships by engaging with stakeholders

By using various channels to communicate directly and indirectly with the customers, partners, regulators, investors, employees, and communities, and by soliciting and incorporating their expectations and feedback to improve operations and services.

Value Creation

Driving innovation and growth through a sustainable product portfolio

By investing in more advanced technologies to develop sustainable products as per customers' requirements.

Implementing circular economy principles and practices

By utilizing more circular feedstocks and energy from renewable sources, as well as promoting PET waste separation.

Enhancing the environmental performance and resilience of operations and supply chains

By collaborating with players in the value chain to strengthen ESG practices and achieve decarbonization goals.

Gaining trust, enhancing our reputation, and improving stakeholder relations

By participating in advocacy programs globally, through industry associations and memberships, adopting best-in-class ESG and sustainability practices, and being listed in recognized ESG ratings.

The sustainability Road Ahead for Indorama Ventures

As a global leader in the chemical industry, Indorama Ventures is committed to enhancing its sustainability performance and creating positive impacts for its stakeholders and the planet. The company has set ambitious targets aligned with the United Nations Sustainable Development Goals (SDGs), with strong focus on the circular economy principles, decarbonization of its operations and value chain, water and waste management, as well as to increase the use of renewable energy, and recycled and bio-based feedstock. The company is also committed to supporting and achieving the commitments of its value chain partners. The path forward poses challenges in achieving ambitions aligned with a 1.5°C climate scenario. In line with global trends, Indorama Ventures is also aspiring to pioneer groundbreaking technologies (commercial scale CCUS), renewable energies (such as green hydrogen), renewable feedstock, and other solutions.

Driving Corporate Purpose Through Social Responsibility Practices

At the core of everything we do, Indorama Ventures continues to promote and leverage our purpose of reimagining chemistry together to create a better world. Through our Corporate Social Responsibility (CSR) practices we strive to address social and environmental challenges by utilizing the company's expertise, while strengthening and building power within the community through advocacy, corporate philanthropy, and shared value initiatives. This ensures the creation of more equitable outcomes for social and economic value.

Alignment in CSR work

As our organization navigates the dynamic landscape of corporate responsibility, we recognize the importance of managing our social impact for a harmonious balance between business success and societal benefit.

In our approach, we go beyond philanthropy. We actively listen and respond to the needs and interests of the people in the communities where we have operations. By doing this, we aim for our efforts to have a collective impact with a multiplier effect. We leverage our company's resources and strengths to not only grow our business but also create opportunities for the community. Throughout this process, we are committed to measuring our impact to ensure our initiatives truly make a difference in society.

Social Responsibility Dimensions and Management					
Key Stakeholders	**Commmunity**	**Educational Institutions**	**Suppliers and Business Partners**	**Public Sector**	**NGOs and Start-ups**
Key Focus Areas	**Knowledge**		**Community Care**		**Environment**
	Equal access to education or training opportunities, acquiring the knowledge and skills needed.		Enabling community development and prosperity.		Protecting and conserving the environment for a greener and better environment.
Our Actions	We support and ensure inclusive and equitable quality education, and promote lifelong learning opportunities for all. The company leverages our expertise in developing free teacher and school resources, including educational materials, to increase awareness and create a better understanding of plastic waste management, including STEM education. We also provide scholarships, innovation support, and training for the public.		We lead by being socially responsible, focusing on contributing to community development, particularly in enhancing the well-being of the local communities around us, including local health care services. We partner with and support the community through various organizations/ foundations, providing for people's basic needs, especially young people, vulnerable people, groups with disabilities, orphans, and the elderly. This includes support for the arts and culture of the community.		We strive to protect and conserve the environment to sustain our planet by encouraging recycling and waste separation among children and youths, communities, and consumers to bring more value for society and to implement a circular economy. We play a leading role in environmental responsibility and protection through recycling, including advocating behavioral change. We collaborate with several sectors to ensure a positive impact on society. We aim to deliver value, whether social, environmental, or economic to remain sustainable in our business.
2030 Targets and Accumulative Performance	Educate one million people globally through recycling awareness programs. Performance: **682,204** people reached (since 2018)		Reach at least 100,000 people in local communities through community development programs. Performance: **98,496** beneficiaries (since 2020)		Collect at least 100 tons of post-consumer PET bottles for recycling through CSR programs. Performance: **80** tons of post-consumer PET bottles (since 2020)

SDGs Alignment			
CSR Initiatives Across the Globe	**Awareness program:** In living our purpose, we are committed to making a positive and long-lasting impact through education, which plays a significant role in helping society to understand sustainability. We focus on recycling education, which can help create a better environment, leading to less waste and fewer greenhouse gases, as well as conserving natural resources. **Research and innovation:** We design and support innovative projects with our partners to create a collective impact through the collaborative programs that contribute to societal progress and sustainable solutions. **Internships and development programs for young people:** We strive to empower local communities for a sustainable future by providing the younger generation with meaningful opportunities, valuable insight, mentorship, and skills development. By contributing to education and professional development, we are not only investing in career growth, but also creating possible job opportunities. At the same time, the program enhances and reinforces the company's workforce planning strategy.	**Supporting local communities:** We are dedicated to empowering local communities, fostering inclusivity, and having a positive social impact. We aim to help solve social issues. Our work focuses on maintaining and building a robust social license that fosters positive relationships with local communities. Through close collaboration with local organizations such as NGOs, foundations, and associations, we ensure that our investments target specific needs and result in a meaningful impact. This cooperative approach amplifies the effectiveness of our efforts and guarantees that our support reaches the local people in need, creating a tangible and lasting difference in their lives.	**Environmental stewardship:** We conserve natural resources, essential for maintaining the health of our planet and ensuring that future generations have access to the resources they need. We emphasize biodiversity and strive to provide greener, livable communities in areas where we have operations. **Partnership program:** We promote the PET Collect Back campaign, collaborating with several partners. We aim to bring post-consumer PET bottles into the recycling process to reduce recyclable waste ending up in landfills, create a circular economy, and support carbon reduction.
Impact	• Prevent illegal dumping and mismanagement of PET recyclable waste. • Promote a circular economy. • Enhance the recyclable qualities of PET bottles, and support sales and bale supply. • Create a social license to operate the business. • Improve the development of new and innovative program designs to address social and environmental issues. • Strengthen relationships for collaboration and partnerships.	• Improve and enhance people's living standards and well-being in rural households. • Alleviate poverty in local communities by generating extra income. • Improve local communities' infrastructure, welfare, and social capital. • Enable better standards of living and social cohesion in the community.	• Reduce recyclable plastic waste. • Prevent recyclable waste from entering landfills and leaking into the ocean. • Cleaner surroundings and environment. • Conserve natural resources and protect the environment. • Reduce carbon dioxide. • Promote biodiversity and natural habitats.
Results in 2023	• 65 initiatives promoted recycling awareness and education. • 24 initiatives supported internship and scholarship programs. • 9 initiatives supported the STEM education and innovation program.	• 165 initiatives supported infra-structure, sports, health, and well-being enhancement. • 110 initiatives supported local activities and events. • 85 initiatives supported groups of vulnerable people, those affected by natural disasters, and emergency cases. • 37 initiatives empowered local enterprise and skills development.	• 15 initiatives supported the waste management system. • 13 initiatives supported reforestation and tree planting programs, including creating greener areas. • 6 initiatives created a better and cleaner environment.

EHS at Indorama Ventures: Our Commitment To Sustainable Success

At Indorama Ventures, Environmental, Health, and Safety (EHS) is a core pillar essential to the Company's long-term success, delivering cost savings, operational excellence, enhanced employee well-being, and industry leadership.

Our ambition is to become a world-class EHS leader and redefine industry benchmarks. To accomplish this, the Corporate EHS Group plays an important role in this transformation, infusing EHS into every process and decision, and fostering a proactive and resilient safety culture. With focus on five key pillars, notable achievements from the past year pave the way for our continued journey toward excellence:

- Governance: Introduction of 18 new standards in areas like Occupational Safety, Health, Industrial Hygiene, and Process Safety. These standards are designed to fortify our foundation and elevate our practices to meet world-class requirements.

- Standardization: Our progress in standardization is marked by advancements in digitalization of EHS processes via the deployment of new software solutions, and enhancing EHS accountability and management, leading to improved performance.

- Assurance: We are enhancing assurance through data validation projects, thorough tracking of EHS-related actions, refining reporting features to enable data-driven insights, and consolidating decision-making capabilities.

- Capability: Our commitment to building capabilities is evident. In 2023, we trained over 550 employees company-wide in the use of new software tools, improving their system knowledge. Moreover, 25 professionals from the Americas underwent root cause analysis training. Comprehensive user guides have been developed to support users in the adoption of the new tools, and our EHS Learning Posts on Viva Engage have garnered over 36,000 impressions, boosting EHS awareness.

- Culture: To embed EHS into our DNA, we have intensified our communication efforts. This includes nine group-share meetings, region-specific sessions, and engaging over 100 EHS professionals in face-to-face knowledge-sharing events. Our Global Safety Week, with a focus on our Golden Safety Rules, achieved 100% site adherence. Additionally, the launch of the EHS Transformation Subcommittee in the Manufacturing Excellence Council marks a new frontier, set to host EHS Leadership boot camps in 2024.

Our achievements in the past year stand as a testament to our dedication, and they guide the way forward. As we continue to raise the bar, we look ahead with enthusiasm to the next chapter of our EHS journey. Together, we are not just setting new standards, instead, we are redefining what is possible and shaping a safer, more sustainable future for Indorama Ventures and the world.

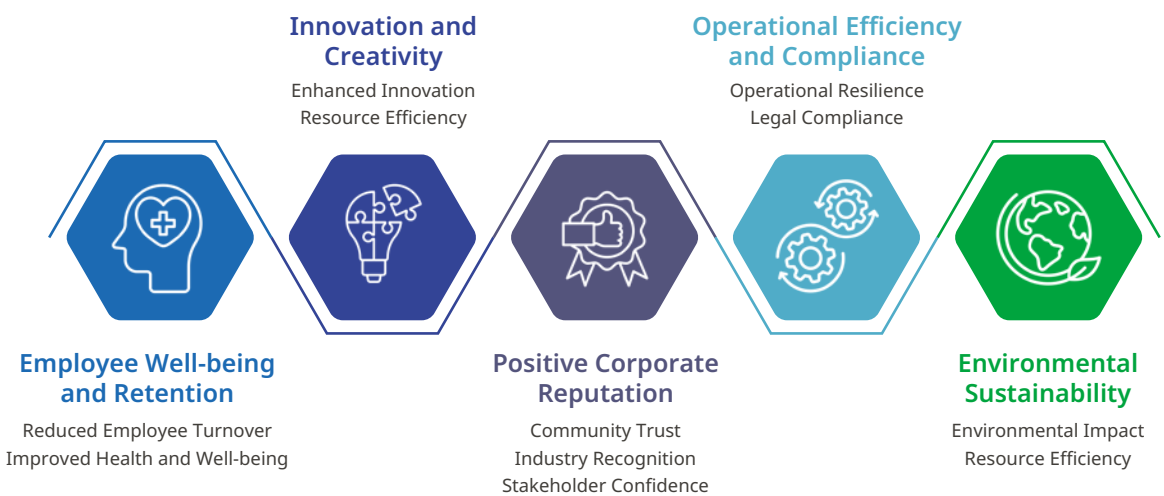


Fig.1 – Key benefits of good EHS management

KPIs review

Since 2019, Indorama Ventures has achieved notable improvements in EHS performance, shown by the improvement in various key performance indicators as follows:

2019 vs 2023

-57%	-46%	-20%	-56%
TRIR	LTIFR	PS TIER 1	PS TIER 2

We achieved a remarkable improvement in Total Recordable Incident Rate (TRIR) performance since 2019, culminating in a notable 15% improvement from 2022 to 2023. Unfortunately, three contractors passed away performing construction activities in India. These fatalities were investigated thoroughly with corrective and preventive measures being put in place, and lessons learned were shared globally.

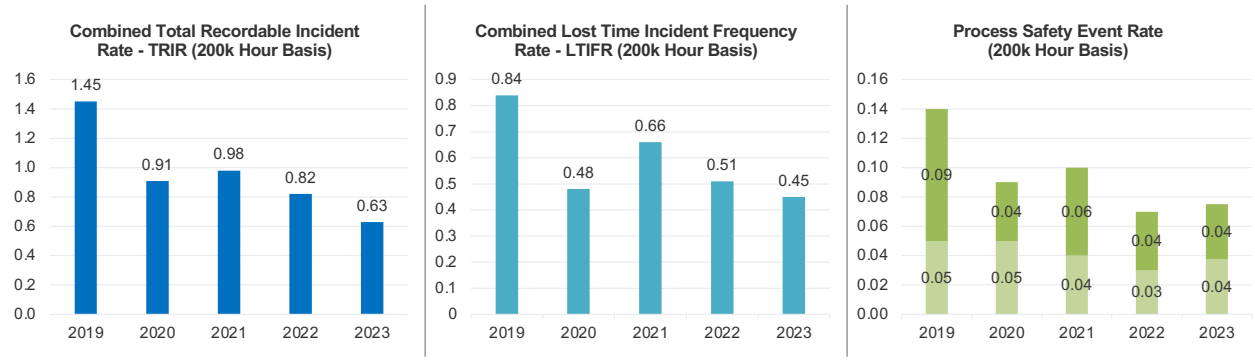


Fig. 2 – EHS performance over the years

While process safety events are well below 2019 levels, opportunities remain to become more systematic in our improvements. Special emphasis is being placed on process safety management in 2024.

Looking ahead: Our continued journey in EHS

As we move forward, our focus on EHS remains unwavering. We are committed to maintaining and enhancing our high standards of responsible and sustainable operations. Our ongoing efforts in EHS are not just about compliance; they are about creating a safer, healthier, and more sustainable future for our employees, communities, and stakeholders.

We believe that a strong EHS framework is the foundation of our long-term success. By investing in EHS, we are investing in the future – a future that is safe, sustainable, and prosperous for all.

General Information

Name	:	**Indorama Ventures Public Company Limited**
Symbol	:	IVL
Head Office	:	75/102 Ocean Tower 2, 37th Floor, Soi Sukhumvit 19 (Wattana), Asoke Road, Klongtoey Nua, Wattana, Bangkok 10110, Thailand Tel: 0-2-661-6661 Fax: 0-2-661-6664-5 www.indoramaventures.com
Type of Business	:	Holding Company
Company Registration No.	:	0107552000201
Registered Capital	:	Baht 5,670,701,908 divided into 5,670,701,908 common shares of par value at Baht 1
Paid-Up Capital	:	Baht 5,614,551,908 divided into 5,614,551,908 common shares of par value at Baht 1

References

Share Registrar	:	**Thailand Securities Depository Company Limited** 93 Ratchadapisek Road, Dindaeng, Dindaeng, Bangkok 10400, Thailand Tel: 0-2-009-9999 Fax: 0-2-009-9991
Debenture Registrar and Debenture Holders' Representative	:	**Bangkok Bank Public Company Limited** 333 Silom Road, Silom, Bangrak, Bangkok 10500, Thailand Tel: 0-2-230-1136 Fax: 0-2-626-4545-6
Debenture Registrar (For IVL Debenture No. 1/2015)	:	**Siam Commercial Bank Public Company Limited** 1060 SCB Chidlom Tower 2, 3rd Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand Tel: 0-2-256-2339 Fax: 0-2-256-2406
Debenture Registrar (For IVL Debenture No. 2/2015)	:	**Krungthai Bank Public Company Limited** 35 Sukhumvit Road, Klongtoey Nua, Wattana, Bangkok 10110, Thailand Tel: 0-2-298-0830 Fax: 0-2-298-0835
Debenture Holders' Representative (For IVL Debenture No. 2/2012 and No.1/2018)	:	**Bank of Ayudhya Public Company Limited** 1222 Rama III Road, Bang Phongphang, Yannawa, Bangkok 10120, Thailand Tel: 0-2-296-3582 Fax: 0-2-296-2202
Auditor	:	**KPMG Phoomchai Audit Limited** 195 Empire Tower, 50th – 51st Floor, South Sathorn Road, Yannawa, Sathorn, Bangkok 10120, Thailand Tel: 0-2-677-2000 Fax: 0-2-677-2222
Legal Advisor	:	**The Capital Law Office Limited** 44 Smooth Life Tower, 18th Floor, North Sathorn Road, Silom, Bangrak, Bangkok, 10500, Thailand Tel: 0-2-633-9088 Fax: 0-2-633-9089

Major Shareholders

Indorama Ventures Public Company Limited

Major shareholders (as of 30 November 2023)[1]

Top ten major shareholders

No.	Shareholders	No. of Shares	%
1.	Indorama Resources Limited[2]	3,634,991,318	64.742
2.	Thai NVDR Limited	441,430,173	7.862
3.	Bangkok Bank Public Company Limited	270,905,264	4.825
4.	Southeast Asia UK (Type C) Nominees Limited	83,948,972	1.495
5.	Social Security Office	83,186,100	1.482
6.	State Street Europe Limited	55,256,607	0.984
7.	VAYU 1 by MFC	24,013,200	0.428
8.	VAYU 1 by KTB	24,013,200	0.428
9.	Provident Fund of Tisco Master Pooled Fund	22,957,300	0.409
10.	Mr. Sataporn Ngamruangpong	22,450,000	0.400
11.	Other Shareholders	951,399,954	16.945
	Total Shares	**5,614,551,908**	**100.00**

Remarks: [1] The Company Secretary has updated the list of major shareholders of the Company to the Board of Directors and senior management every quarter.

[2]

Group of Lohia Family	No. of Shares	%
- Indorama Resources Limited*	3,634,991,318	64.74
- Mr. Aloke Lohia**	1,000,010	0.02
- Mr. Anuj Lohia	10	0.00

* Owned by Canopus International Limited*** 99.98%

** Mr. Aloke Lohia's shareholding in the Company, through his family holding in Canopus International Limited, is more than 25 times of his annual base salary.

*** Mr. Aloke Lohia and his immediate family jointly hold voting rights of 76% and an equity interest of 50% in Canopus International Limited, while the remaining voting rights of 24% and 50% of the equity interest of Canopus International Limited are ultimately controlled by a Trust in which Mr. Sri Prakash Lohia and his immediate family members are the discretionary beneficiaries.

Other Material Information

Securities of the Company

As of 31 December 2023, Indorama Ventures Public Company Limited (the "**Company**") had the Registered Capital of Baht 5,670,701,908 divided into 5,670,701,908 ordinary shares with the par value of Baht 1 per share and Paid-up Capital of Baht 5,614,551,908 divided into 5,614,551,908 ordinary shares with the par value of Baht 1 per share.

Major shareholders whose behaviours materially influence the management policy making or the Company's operation

Group of Lohia Family[1] holding the Company's shares at 64.76 percent

Remarks: [1]Group of Lohia Family

	No. of Shares	%
• Indorama Resources Limited*	3,634,991,318	64.74
• Mr. Aloke Lohia	1,000,010	0.02
• Mr. Anuj Lohia	10	0.00

* Owned by Canopus International Limited** 99.98%

** Mr. Aloke Lohia and his immediate family jointly hold voting rights of 76% and an equity interest of 50% in Canopus International Limited, while the remaining voting rights of 24% and 50% of the equity interest of Canopus International Limited are ultimately controlled by a Trust in which Mr. Sri Prakash Lohia and his immediate family members are the discretionary beneficiaries.

The Ultimate Shareholders of the Company

Indorama Resources Limited holds 64.74 percent in the Company's shares.

Shareholders' Agreement

- None -

Debentures

1. Debentures of Indorama Ventures Public Company Limited

The extraordinary general meeting of shareholders held on 22 September 2011, the annual general meeting of shareholders held on 29 April 2013, the annual general meeting of shareholders held on 24 April 2015 and the annual general meeting of shareholders held on 24 April 2019, approved the issuance of debentures, in total not exceeding Baht 150,000 million.

During year 2023, the Company had issued unsubordinated and unsecured debentures with debenture holders' representative on 18 May 2023 in the amount of Baht 10,000 million. On 8 June 2023 and 27 June 2023, unsubordinated and unsecured debentures were matured in the amount of Baht 3,000 million and Baht 1,100 million, respectively.

As of 31 December 2023, the Company had outstanding unsubordinated and unsecured debentures totalling Baht 69,325 million and the subordinated perpetual debentures totalling Baht 15,000 million as follows:

Debentures issued on 14 December 2012:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL24DA	Debentures of INDORAMA VENTURES No. 2/2012 Tranche 4	1,475	5.28%	12 years	14 December 2024
Total		**1,475**			

Debentures issued on 14 March 2014:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL243A	Debentures of INDORAMA VENTURES No. 1/2014 Tranche 3	1,400	5.30%	10 years	14 March 2024
13 October 2025		1,400			

Debentures issued on 13 October 2015:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL25OA	Debentures of INDORAMA VENTURES No. 1/2015 Tranche 2	1,100	4.20%	10 years	13 October 2025
Total		**1,100**			

Debentures issued on 9 December 2015:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL25DA	Debentures of INDORAMA VENTURES No. 2/2015	1,150	3.92%	10 years	9 December 2025
Total		1,150			

Debentures issued on 20 October 2016:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL26OA	Debentures of INDORAMA VENTURES No. 1/2016 Tranche 2	200	3.68%	10 years	20 October 2026
IVL28OA	Debentures of INDORAMA VENTURES No. 1/2016 Tranche 3*	2,200	4.10%	12 years	20 October 2028
IVL31OA	Debentures of INDORAMA VENTURES No. 1/2016 Tranche 4*	2,300	4.39%	15 years	20 October 2031
Total		**4,700**			

Note * The issuer has rights of early redemption

Debentures issued on 4 May 2017:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL245A	Debentures of INDORAMA VENTURES No. 1/2017 Tranche 3	1,000	3.75%	7 years	4 May 2024
IVL275A	Debentures of INDORAMA VENTURES No. 1/2017 Tranche 4	2,000	4.11%	10 years	4 May 2027
IVL295A	Debentures of INDORAMA VENTURES No. 1/2017 Tranche 5	2,000	4.28%	12 years	4 May 2029
Total		**5,000**			

Debentures issued on 16 November 2017:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL24NA	Debentures of INDORAMA VENTURES No. 2/2017 Tranche 1	300	2.92%	7 years	16 November 2024
IVL27NA	Debentures of INDORAMA VENTURES No. 2/2017 Tranche 2	700	3.46%	10 years	16 November 2027
IVL32NA	Debentures of INDORAMA VENTURES No. 2/2017 Tranche 3	1,000	3.90%	15 years	16 November 2032
Total		**2,000**			

Debentures issued on 8 June 2018:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL256A	Debentures of INDORAMA VENTURES No. 1/2018 Tranche 3	1,500	3.18%	7 years	8 June 2025
IVL286A	Debentures of INDORAMA VENTURES No. 1/2018 Tranche 4	1,800	3.83%	10 years	8 June 2028
IVL306A	Debentures of INDORAMA VENTURES No. 1/2018 Tranche 5	5,000	4.12%	12 years	8 June 2030
IVL336A	Debentures of INDORAMA VENTURES No. 1/2018 Tranche 6	3,200	4.27%	15 years	8 June 2033
Total		**11,500**			

Debentures issued on 8 November 2019:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL19PA	Subordinated Perpetual Debentures of INDORAMA VENTURES No. 1/2019	15,000	5.00%	Perpetual	Redemption Upon Liquidation
Total		**15,000**			

Debentures issued on 27 November 2020:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL25NA	Debentures of INDORAMA VENTURES No. 1/2020 Tranche 1	4,000	2.78%	5 years	27 November 2025
IVL27NB	Debentures of INDORAMA VENTURES No. 1/2020 Tranche 2	1,990	3.15%	7 years	27 November 2027
IVL30NA	Debentures of INDORAMA VENTURES No. 1/2020 Tranche 3	3,010	3.42%	10 years	20 November 2030
Total		**9,000**			

Debentures issued on 3 November 2021:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL26NA	Sustainability-Linked Bonds of INDORAMA VENTURES No. 1/2021 Tranche 1	3,000	2.48%	5 years	3 November 2026
IVL28NA	Sustainability-Linked Bonds of INDORAMA VENTURES No. 1/2021 Tranche 2	2,000	3.00%	7 years	3 November 2028
IVL325A	Sustainability-Linked Bonds of INDORAMA VENTURES No. 1/2021 Tranche 3	5,000	3.60%	10.5 years	3 May 2032
Total		**10,000**			

Debentures issued on 1 April 2022:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL274A	Debentures of INDORAMA VENTURES No. 1/2022 Tranche 1	4,300	2.66%	5 years	1 April 2027
IVL294A	Debentures of INDORAMA VENTURES No. 1/2022 Tranche 2	2,700	3.24%	7 years	1 April 2029
IVL324A	Debentures of INDORAMA VENTURES No. 1/2022 Tranche 3	5,000	3.65%	10 years	1 April 2032
Total		**12,000**			

Debentures issued on 18 May 2023:

Symbol	Name of Debenture	Amount (MB)	Interest Rate per year	Term of Issue	Maturity Date
IVL265A	Debentures of INDORAMA VENTURES No. 1/2023 Tranche 1	2,950	3.00%	3 years	18 May 2026
IVL285A	Debentures of INDORAMA VENTURES No. 1/2023 Tranche 2	3,500	3.40%	5 years	18 May 2028
IVL335A	Debentures of INDORAMA VENTURES No. 1/2023 Tranche 3	1,550	3.89%	10 years	18 May 2033
IVL355A	Debentures of INDORAMA VENTURES No. 1/2023 Tranche 4	2,000	4.02%	12 years	18 May 2035
Total		**10,000**			

2. Debentures of Indorama Ventures Investments & Holdings Pte. Ltd.

The resolution of Indorama Ventures Investments & Holdings Pte. Ltd., an indirect subsidiary of the Company, held on 25 August 2015 approved the issuance of debentures up to an amount not exceeding USD 140 million equivalents in Singapore dollars.
On 7 October 2015, Indorama Ventures Investments & Holdings Pte. Ltd. issued the Senior Unsecured Debenture of SGD 195 million (equivalent to USD 138 million) to institutional investors in Singapore. The debenture is guaranteed by Credit Guarantee & Investment Facility, a trust fund of the Asian Development Bank and listed on the SGX-ST.

Debenture issued on 7 October 2015:

No.	Amount (M SGD)	Interest Rate per year	Term of Issue	Maturity Date
1/2015	195	3.73%	10 Years	7 October 2025
Total	**195**			

3. Debentures of Avgol Industries 1953 Ltd. (“Avgol”)

As at 31 December 2023, Avgol, an indirect subsidiary of the Company, had outstanding unsecured debentures totalling USD 44.6 million, as follows:

No.	Amount (M USD)	Interest Rate per year	Term of Issue	Maturity Date
1/2014-C	23.1	4.75%	10 Years	31 December 2024
1/2017-D	21.5	3.90%	8 Years	31 December 2025
Total	**44.6**			

On 14 August 2014, Avgol issued the Unsecured Debenture series C of ILS 502 million to the public.
On 28 March 2017, Avgol issued the Unsecured Debenture series D of USD 53.9 million to the public.

4. Debentures of Indorama Ventures Global Services Limited (“IVGSL”)

The resolution of IVGSL held on 27 June 2019 approved the issuance of debentures up to an amount not exceeding USD 600 million (or its equivalent in any other currencies).

On 12 September 2019, IVGSL issued senior unsecured bonds to foreign institutional investors for the total amount of USD 300 million. The debenture is guaranteed by the Company.

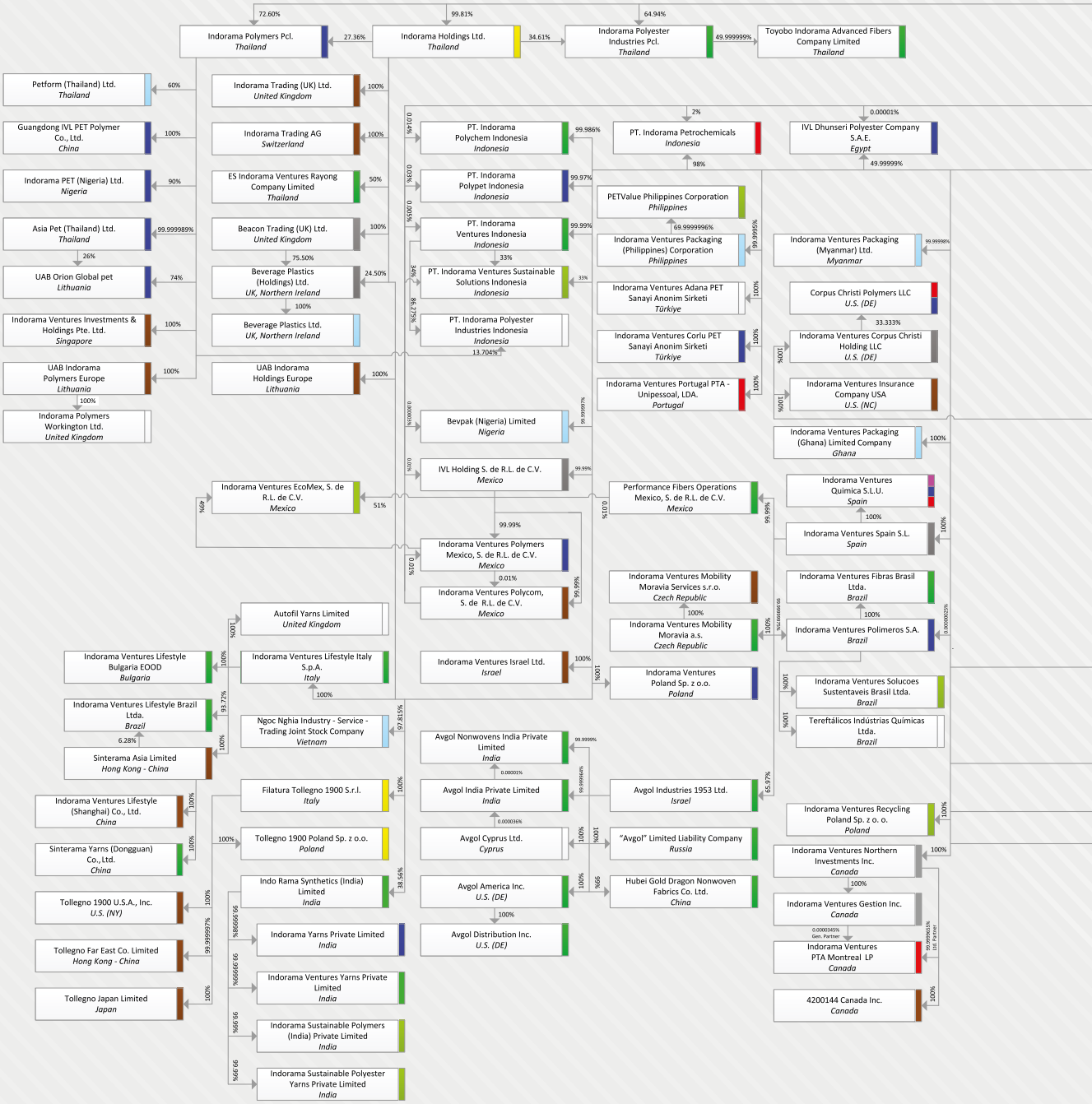
Debenture issued on 12 September 2019:

No.	Amount (M USD)	Interest Rate per year	Term of Issue	Maturity Date
1/2019	300	4.375%	5 Years	12 September 2024
Total	**300**			

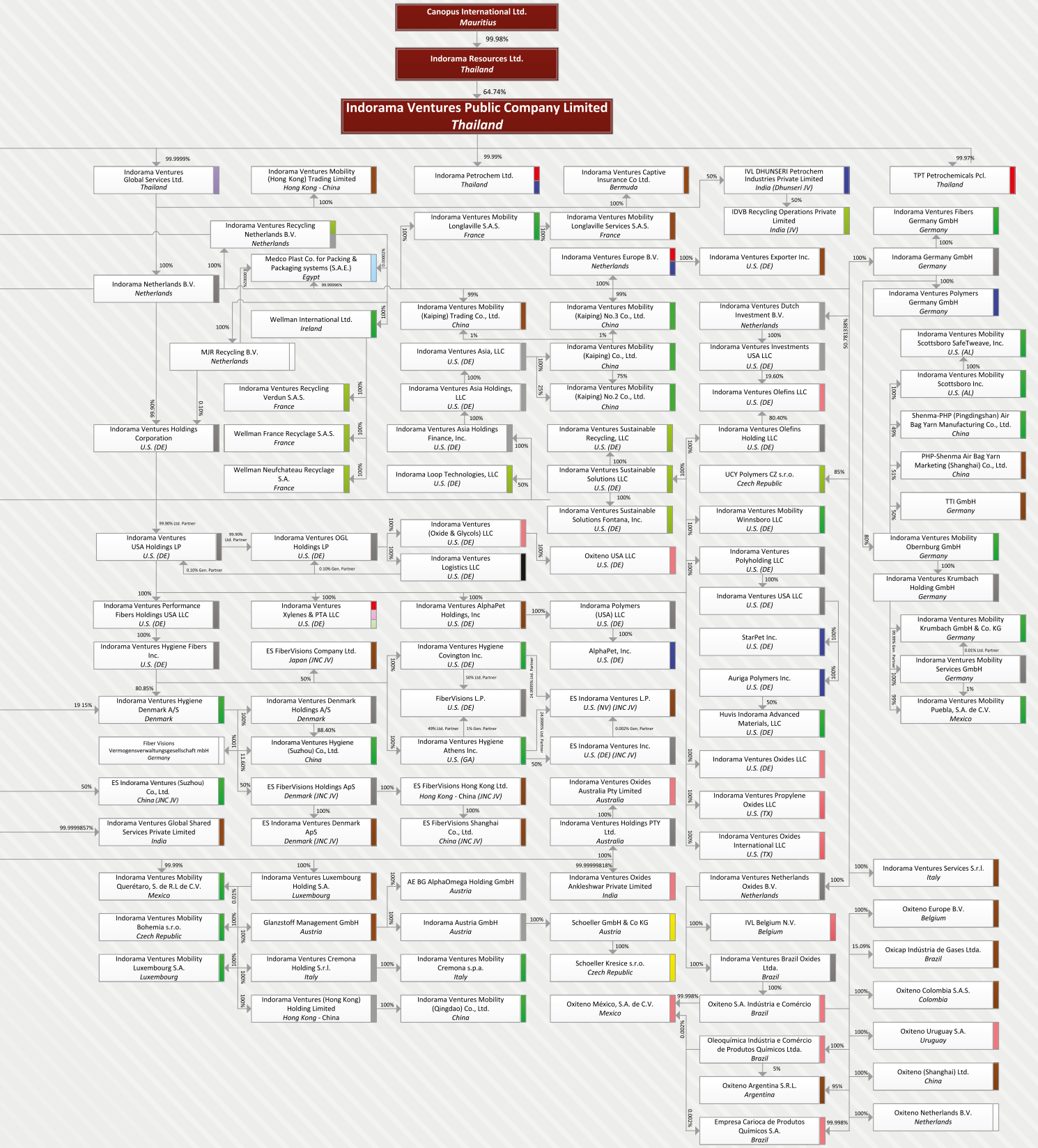
Legal Disputes

As of 31 December 2023, there is no material litigation against the Company or its subsidiaries which could have a negative effect on our assets exceeding 5% of shareholder’s equity. In addition, there is no lawsuit, which could have a significant effect on our business.

IVL Group
Corporate Structure



- PET Business Entity
- Packaging Business Entity
- PTA Business Entity
- Purified Isopthalic Acid Business Entity
- NDC Business Entity
- Paraxylene Business Entity
- Recycling Business Entity
- Fibers Business Entity
- Wool Business Entity
- Integrated Oxides And Derivatives Business Entity
- Holding Entity
- International Headquarter Entity
- Trading and/or Service Entity
- Logistic Entity
- Non-Operating Entity



As of 31st December 2023

Dividend Payment Policy

Indorama Ventures Public Company Limited

The Company's policy is to pay a total dividend of not less than 30% of net profit after tax and appropriation to the legal reserve. However, the Board of Directors has the authority to consider waiving or amending the Dividend Payment Policy subject to the conditions that bring the greatest benefit to shareholders, such as using a portion of net profit as reserve for debt payments, capital investments for production expansion, or as support in case of changing market conditions which could affect the Company's future cash flows.

Subsidiary companies

The payout of dividends by subsidiaries to Indorama Ventures is up to 80% of their net profit after tax and after appropriation to the legal reserve. However, the Board of Directors of the subsidiaries reviews the dividend payments and may amend the Dividend Payment Policy by considering the reserves for debt payments, capital investments for production expansion, as support in case of changing market conditions, or to manage future cash flows as required.

Corporate Governance Report 2023

Corporate governance is deeply ingrained in our company's core practices, reflecting our unwavering commitment to ethical conduct and transparency. Adherence to established corporate governance standards, such as the Corporate Governance Code for Listed Companies 2017 by the Securities Exchange Commission (SEC), underscores our dedication to long-term sustainability and responsible business practices. We distribute our Corporate Governance Manual ("**the Manual**") approved by the Board of Directors to all stakeholders, including directors, management, and employees, and provide ongoing education through our Corporate Governance Department to raise awareness and ensure compliance.

9.1 Corporate Governance Principles

The Corporate Governance Policy has been renamed the Corporate Governance Principles, which follows the guidelines of the Stock Exchange of Thailand (SET) and Corporate Governance criteria under the OECD Principles. The CG principles provide the foundation for sound, long-term oriented governance, and balance the interests of the Company's many stakeholders.

The Board of Directors observes the Corporate Governance Code for listed companies 2017 (the Code) issued by the SEC. In addition, the Board oversees and enforces the Company's adherence to the rules and regulations issued by the SEC and Capital Market Supervisory Board (CMSB) while it also implements the recommendations in the Corporate Governance Report of Thai Listed entities (CGR), issued by the Institute of Directors (IOD), ASEAN Corporate Governance Scorecard, Transparency International and other CG rating agencies.

Highlighted Corporate Governance Practices in 2023

Indorama Ventures has adopted and complied with the principles of good corporate governance as recommended by the SET and explained in the various sections below. However, the following may be noted:

1. Four of the policies in the Manual were reviewed and updated in February 2023. Details are further explained below in the Indorama Ventures' Corporate Governance Policy Awareness Campaign 2023.
2. Indorama Ventures has a Chairman of the Board who is a Non–executive Director and a major shareholder, who was selected because of his experience in what is an extraordinarily complex industry. The Chairman has no role in the management of the Company, but his experience is called upon to advise the Board, as necessary. He was re-appointed for another term.
3. The Company formalized the appointment of a Lead Independent Director (LID) in February 2018. The roles and responsibilities of the LID were revised in 2019 to be aligned with good governance recommendations and practices.
4. A new independent director was appointed to the Nomination, Compensation and Corporate Governance (NCCG) Committee as a successor to a retired director.
5. Charters and other governance policies were reviewed, and amendments were made as required. This is discussed in a later section of the report.
6. The Company strengthened its personal data protection to comply with the Personal Data Protection Act 2012 (PDPA), Thailand and the EU General Data Protection Regulations (GDPR). Further details are provided in the Personal Data Protection section.
7. The Company does not use "Cumulative Voting" for the election of Company directors.

We received the following assessment and awards for good corporate governance practices in 2023.

1. Awarded by the Thai Investor Association for achieving a 100% score for the Annual General Meeting for 12th consecutive years.
2. An **"Excellent - 5 Star" CG score** by Thai Institute of Directors (IOD) in conjunction with the Stock Exchange and Security Exchange Commission of Thailand for the practice of **Corporate Governance of Thai Listed Companies**. The excellent CG score is the highest possible rating and awarded to firms with a score of 90-100 percent. This was the 11th consecutive years that we received the "5 star" rating. Furthermore, we have also earned a place among the 'Top Quartile Companies' for the first time in the category of companies with a market capitalization exceeding 10,000 million baht.

Indorama Ventures' Corporate Governance Awareness Campaign 2023

Indorama Ventures has conducted a Corporate Governance Policy Awareness Campaign (CGPAC) since 2013, ensuring that there is a clear understanding of, and adherence to, governance policies. The CGPAC Team in Bangkok communicates, monitors progress, provides guidance and support, to implement training programs that reinforce good governance practices throughout the company's 35 countries globally.

In 2023, the Board of Directors approved update to key policies within the Corporate Governance Manual, including Anti-Corruption, Intellectual Property, Human Rights, and Whistleblowing. These revisions ensure our governance practices remain aligned with the highest standards. Details will be elaborated in the respective sections.

Following the update, the CGPAC Team supported the implementation of the updated version at all units by:

- Coordinated with local teams to translate the Manual in 22 languages.
- Developed an e-book version of the Manual with updated contents in English, Chinese, Portuguese, Spanish and Thai.
- Distributed videos informing employees about updates within the Manual as a part of employee training. The videos were made available in 22 languages, Arabic, Bulgarian, Burmese, Chinese, Czech, Danish, Dutch, English, France, German, Indonesian, Italian, Lithuanian, Polish, Portuguese, Portuguese (Brazilian), Spanish, Spanish (Latin America), Slovak, Thai, Turkish and Vietnamese.
- Distributed a set of five training videos summarizing contents within the Manual as a part of employee training. The videos were made available in all 22 languages.
- Updating the CG Database which is a platform where the CGPAC Team shares all CG related information with the local teams at the units. This includes sharing good CG practices and news from both internal and external sources.
- Conducting training sessions for local management teams on the changes in the 2023 version of the Manual. The training emphasized Whistleblower Policy, and Whistleblower Reporting Channel, Anti-Corruption Policy, and Human Rights Policy to be further discussed in the report. Additionally, in 2023, the CGPAC Team conducted more than 20 sessions in both Thailand and overseas units, covering approximately 1,000 employees. The team plans to continue conducting on-site trainings in Thailand and overseas in 2024.

All site heads are responsible for the Manual implementation and report their results to the CGPAC Team, which in turn shares its report with the NCCG Committee and the Board.

Site/HR heads ensure that new employees are informed of the Manual upon joining and must acknowledge their understanding. This ensures all employees are aware of the program.

The CGPAC Implementation Report for 2023 revealed that 88% of all employees attended CG training in the past three years.

For 2023, the CGPAC Team implemented a digital system to facilitate data collection throughout its workflow. This system not only supports all units in submitting information more easily to the CGPAC Team but also enhances the implementation process.

Policies related to the Manual are reviewed annually and submitted to the Board for approval. The Manual is reviewed and revised every three years.

9.1.1 Rights and Equitable Treatment of Shareholders

Indorama Ventures' utmost priority is to protect the rights of all shareholders and encourage them to exercise their legal rights.

It is the right of all shareholders to participate in shareholders' meetings; to appoint a proxy, to participate and vote at shareholder meetings on the various Agenda items which had been circulated in the Notice to the meeting. We implemented all shareholder rights at the Annual General Meeting of Shareholders No. 1/2023, held on 25 April 2023.

Shareholders' rights also include the eligibility to receive dividend payments and the right to give opinions and enquire into the Company's business matters at the shareholders' meeting.

Indorama Ventures also recognizes the equal rights of shareholders to obtain accurate, adequate, and timely information from the Company for their decision-making.

Indorama Ventures has no agreement of any kind with any of its shareholders and has a straight-forward structure with its subsidiaries, affiliates and joint venture partners with no joint holding and crossholding of shares.

Information on Indorama Ventures Group's structure is available under the "Our Company" section of our website and is updated quarterly.

a. General Rights and Equality

Indorama Ventures provides an opportunity for minority shareholders to propose agenda items and to nominate qualified individuals to be elected as Directors of the Company before the AGM for a period of over 90 days. Such notifications to shareholders are posted on the websites of the SET and the Company, most recently on 5 September 2023. The notification clearly stated all procedures and criteria for proposals. We have not received any shareholder proposals, and this was conveyed to the Board in February 2024.

We will continue to provide opportunities for minority shareholders to participate in fundamental corporate decisions.

To ensure that shareholders receive the annual audited financial statements and quarterly reviewed financial results on time, we disclosed the 2022 annual audited financial statements and the three reviewed quarterly financial statements on the same day of their approval by the Board of Directors and/or Audit Committee. These were posted to our website, in addition to the SET's site, in both English and Thai.

We provide regular and timely disclosures on our website and through the SET on all relevant information, such as the Form 56-1 One Report; all Shareholders' Meeting resolutions; important Board resolutions; acquisition updates; opportunity day presentations; analyst reports; press releases and other relevant information at the Company or subsidiary level in an effort to keep shareholders adequately informed on a timely basis.

Normally, shareholders are notified more than 30 days before the shareholders' meeting. Each shareholder receives complete information on the criteria and procedures of the meeting. The Annual General Meeting of Shareholders No. 1/2023 was held on 25 April 2023, on an electronic platform. The Notice was issued on 27 March 2023.

All information sent to shareholders was posted on our website in both English and Thai on 15 March 2023. Shareholders were able to download the relevant information including proxy forms.

The notice of the meeting was also communicated through the SET on 15 March 2023, and in local newspapers to remind shareholders to participate in the meeting.

Shareholders were informed they could submit questions and comments on the agenda in advance of the date they were notified of the meeting. The procedure for submitting such questions was clearly explained in the notice to the meeting.

Shareholders were given the opportunity to appoint any one of the three Independent Directors as their proxy. The Independent Directors' profiles were attached to the meeting notification.

On the meeting date, we arranged for shareholder registration to start more than two hours before the meeting. The electronic arrangements were made from our registered office and a recognized third-party vendor was engaged to make all arrangements. Shareholders who registered to attend the meeting received their username and password in addition to a manual on using the E-Meeting System. Shareholders then logged in and were able to view a live broadcast of the meeting, vote on each agenda item as applicable from their device and view the result of the vote.

For the voting and vote counting procedures at the meeting, shareholders had the right to vote according to the number of shares held, wherein one share is equal to one vote. For each agenda item, each shareholder was eligible to cast his/her vote, to approve, disapprove or abstain from voting. No split voting was allowed. Exceptions were made for proxy holders of foreign investors who appointed custodians in Thailand to hold their clients' securities. Each shareholder cast his or her vote for each agenda item using the menu "Vote" in the system. The system automatically counted the vote of a shareholder who did not vote on any agenda item as "approved," and the votes counted according to the number of shares they held.

To enable shareholders to make decisions, Indorama Ventures provided adequate information in the notice to the meeting as to the agenda items.

Appointment of New Directors and Reappointment of Retiring Directors

Two Directors on the Board retired by rotation and agreed to be reappointed for another term. In this regard, they gave their consent to the NCCG Committee to consider their reappointment. The NCCG Committee, after considering the experience and contributions of the retiring Directors, deemed it appropriate to reappoint them for another term and recommended the same to the Board.

Furthermore, Two Directors (independent) retired without re-election, having reached the mandatory retirement age specified in the Board Charter and one Director retired from the services of the Company, therefore, not gave his consent for re-election,

Regarding the vacancy arising from the retirement of three Directors above, and not standing for re-election, the NCCG Committee acknowledged their retirement and decided not to appoint any replacement directors in their place. As a result, the number of the Board of Directors was reduced from 15 to 12. The reduction in the size of the Board to 12 from 15 was taken in relation to the recommendation of IOD. The NCCG Committee further decided to have a mix of five Independent, two non-executive and five Executive directors.

Profiles of two Directors retiring and offering themselves for reappointment included the following information, to assist shareholders. Their name, age, type of directorship, family relationship with other directors, educational background, director training, work experience, positions held in other listed organizations, position in a competing company/connected business that may cause a conflict of interest, number of years as an Indorama Ventures director, shareholdings, legal disputes, meeting attendance and the opinion of the Board.

Indorama Ventures' *Board Competency and Diversity Matrix* shows the diversity of directors in terms of demographics and skills. It can be found at the bottom of the Board of Directors page on our website. The matrix is reviewed periodically.

A new Board Diversity Policy was adopted in November 2022 and uploaded on the Company's website.

No Director of the Board was proposed by major shareholders.

The appointment and reappointment of retiring Directors was approved by shareholders based on "one share, one vote."

Minority shareholders were given the opportunity to nominate qualified individuals to be elected as Directors of the Company before the AGM for a period of over 90 days, but no proposals were received by the Company.

b. Directors Remuneration

Independent and Non-Executive Directors

The Board reviewed and recommended to shareholders the remuneration of Independent and Non-Executive Directors for 2023 And the annual bonus for all Indorama Ventures Directors payable for 2022 performance as recommended by the NCCG Committee.

The policy followed by the NCCG Committee to determine the compensation and benefits of Independent and Non-Executive Directors are:

- Compensation should pay directors fairly for work required in a company commensurate with the size and scope of the work.
- Compensation should, if possible, align directors' interests with the long-term interests of shareholders.
- The structure of the compensation should be simple, transparent, and easy for shareholders to understand.
- Compensation for Non-executive Directors and Independent Directors is inclusive of a monthly retainer fee and annual bonus based on the Company's previous year's performance.
- Additional compensation will be paid to directors serving on subcommittees.

To implement the policy, the NCCG Committee designs a compensation package based on comparable listed companies using the following criteria:

The remuneration of the Chairman of the Board and Chairmen of the sub-committees who are either Independent or Non-Executive Directors is calculated at approximately 1.5 times the other members.

In determining the bonus payable to all Directors, the NCCG Committee assesses the individual performance annually based on their contributions, responsibilities, expertise, and attendance. This assessment is undertaken by way of a Director Self-Evaluation Form.

The total bonus is determined in relation to the dividend payment of the Company and uses a point system to allocate among the directors with Board approval. The retainer fee for chairman has been increased from 75,000 Baht to 100,000 Baht per month and the retainer fee for independent directors and non-executive director have been increased from 60,000 Baht to 80,000 Baht per month. No retainer fee was paid to Executive Directors on the Board of Indorama Ventures.

Details of the remuneration paid in 2023 to Independent Directors and Non-Executive Directors and the bonus for 2022 performance to all Directors appears in the latter part of this report under "Director Performance".

The Chairman of the NCCG Committee explained the above policy and the basis of calculating the remuneration of Independent and Non-Executive Directors to shareholders at the 2023 Annual General Meeting.

Executive Directors and Management

The policy and criteria for Executive Directors and Management remuneration is elaborated in the Board of Directors Performance herein under.

c. Appointing the External Auditor and Approving the Audit Fee

To facilitate shareholder voting, the notice of the meeting detailed the name of the audit firm, the auditors' names, the independence of the proposed auditors, the number of years they acted as the Company's auditor, the total audit and non-audit fees paid in 2021 and 2022 And separately, the Company audit fee proposed in 2023, together with the opinion of the Board based on the recommendation of the Audit Committee.

d. Payment of Dividend - Interim Dividends

The dividend policy of the Company states that a dividend will be paid at not less than 30% of net profit after tax and appropriation to the legal reserve.

In compliance with the dividend policy of the Company, the Board proposed a final dividend payout for 2022 performance at 1.60 baht per share.

f. Shareholders' Meeting

Indorama Ventures' policy is to conduct shareholders' meetings in accordance with its Articles of Association and related laws to allow shareholders to fully exercise their rights in an informed manner.

The Annual General Meeting of shareholders must be organized within four months of the closure of the fiscal year of December. For fiscal year 2022, the Company arranged the shareholders' meeting using an electronic platform (E-AGM) arranged by Quidlab Company Limited, which is an ETDA certified service provider for electronic meetings. The E-AGM was held on 25 April 2023. The meeting started with 1,072 shareholders in person or proxy, and this represented 82.271% of the total shares sold. At the close of the meeting there were 1,078 shareholders in person or proxy representing 82.274%. The meeting started at 2.00 pm and ended at 4.00 pm.

Three Directors, including Chairman of the Audit Committee, Chairman of the NCCG Committee, Group CFO, the external auditors, the corporate internal auditor, and the legal counsel of the Company were present in person at the registered office to conduct the meeting.

All other Directors joined the meeting online from their respective locations.

During the meeting, all shareholders were encouraged to state their questions, express their opinions, suggestions, make recommendations and request additional information to clarify any issues relating to the meeting.

The Chairman and his representative, Mr. Rathian Srimongkol, briefed shareholders on the criteria governing the meeting, including the voting procedure. The legal counsel from The Capital Law Office, the Company's legal counsel, was nominated to monitor the meeting to ensure it was conducted in accordance with the laws and the article of association of the Company. Before starting with the agenda items, Mr. Rathian explained the proceedings of the meeting, including the voting method and submission of questions or opinions. Shareholders who registered to attend this meeting received their usernames and passwords in addition to a manual for using the E-Meeting System. Shareholders who logged in were able to view the live broadcast of the meeting, vote on each agenda item as applicable from their device and view the voting result for each agenda item. If any shareholder or proxy wanted to give his or her opinion or ask questions, they were requested to type their opinion and/or questions in the E-Meeting System, which was then passed on to be addressed by the concerned director. Answers to any questions that were not addressed during the meeting were posted on Indorama Ventures' website.

The vote count was conducted in a transparent manner with one share being equal to one vote. Approval of a resolution was based on a majority of votes.

During the meeting, the Company did not introduce any unexpected important information or any new agenda items that were not notified earlier.

Indorama Ventures ensured that all shareholders were accommodated to attend the meeting even beyond the specified time limit.

The Chairman provided shareholders with opportunities to have their questions addressed to himself, the GCEO, GCFO, Chairman of the Audit Committee, and Chairman of the NCCG Committee during the meeting. All of the agenda items were passed by an average of around 98% of the total eligible votes. Each resolution of the meeting, including the number of votes cast, was disclosed on the SET's website on the same day of the meeting.

The meeting minutes were recorded. They included the names of the Directors who attended the meeting, a summary of the questions asked, important explanations and clarifications, and the voting results of each agenda and sub-agenda divided into for/against/abstained. The minutes were submitted to the SET within the required period of 14 days after the AGM date. A copy of the minutes was also posted on the Company's website.

f. Reporting of, and Trading in, Indorama Ventures Securities

The Company has a policy in place on the reporting of, and trading in Indorama Ventures securities. Under this policy, no director or management shall directly or indirectly trade in the company securities during a period of 30 days prior to, and two days after, the date of filing with the SET of the Company's quarterly and annual financial statements. Furthermore, management or any director who trades in the company securities must report to the SEC using the prescribed form within three working days and inform the Company Secretary's Department immediately. Every quarter, a summary of the shareholdings of Directors and management is reported to the Board.

g. Connected Transactions

The Company has in place a detailed policy on connected transactions which is stringently followed. The policy states who are connected parties and what constitutes a connected transaction; the types of connected transactions and their threshold criteria/values for approval and disclosure purpose, and what procedure to follow when there is a new connected transaction. The policy guidelines are circulated at the beginning of the quarter to remind all concerned about the compliance requirements pertaining to connected transaction reporting. Based on quarterly connected transaction details submitted by Indorama Ventures entities globally, the Internal Audit Department, assimilates the transactions summary and capture the connected transaction details in the quarterly Connected Party Transaction (CPT) report for review and approval by the Audit Committee. Any new connected transaction is brought to the notice of the Internal Audit Department, which will review quarterly whether such connected transaction details are in line with the rules and regulations of the SEC/SET and then make its recommendations to the Audit Committee through its Secretary. The Audit Committee, after their review, either approves

or disapproves the transaction on an arm's length basis and uses the underlying facts of the transaction. At every quarterly meeting of the Audit Committee and Board of Directors a statement is submitted of all the continuing connected transactions of the Company and its subsidiaries for acknowledgement.

However, Indorama Ventures and its subsidiaries may have connected transactions with their directors, management, or other connected persons. As a result, the Board of Directors Meeting approves, in principle, that management is empowered to approve such transactions transparently, provided that such a transaction is under the same commercial terms as those an ordinary person would agree to with any unrelated counterparty under similar circumstances, For example on the basis of commercial negotiations (general trading conditions) and without any dependent interest resulting from the status of director, manager or connected person, as the case may be.

Any Director who is directly or indirectly interested in any transaction abstains from discussions and voting. The Company has not given any financial assistance or guarantee to any external party.

A summary of connected transactions is reported separately in the 56-1 One Report.

9.1.2 Role of Stakeholders

Indorama Ventures values all stakeholders, including shareholders, personnel, partners, customers, competitors, creditors, communities, environment, and society. Their support is key to our competitive advantage and profitability.

The Company's policy safeguards their rights by strictly complying with applicable laws and regulations and takes into consideration their interests.

Our policies, in a total of nine, relating to its directors, employees and stakeholders are part of the Manual and separately disclosed on the website for reference and are all uniformly structured.

Under the CGPAC initiative, management are aware of and understand stakeholder policies as do employees through ongoing training, seminars, and implementation monitoring.

We also communicate the Manual and Responsible Sourcing Policy (previously called the Suppliers Code of Conduct) to key stakeholders, including contractors, suppliers, customers, and local authorities, to ensure understanding of our corporate policies. On average, 74% of units directly communicated with these stakeholders in 2023.

We publish a Sustainability Report every year which is available in the Sustainability section of our website.

a. Shareholders:

We conduct our business, together with our subsidiaries, in a transparent and efficient manner with a view to enhancing shareholder value and returns. We will only seek new businesses and projects that are accretive to shareholder value. We strongly support shareholder engagements to deepen their understanding of our operations and business activities and foster interaction with management. To facilitate this process, we engaged shareholders by organizing an annual plant visit in Thailand.

However, in 2023, we did not organize the plant visit for shareholders. Such annual visits shall continue to be organized soon. The Company held its annual Capital Markets Day on 1 March 2023 to explain to investors from both the buy and sell side of the work completed by management over the course of the year. Senior management from global business units were introduced to investors, who had the opportunity to raise questions about the business.

b. Customers:

Indorama Ventures is committed to building long-term, loyal relationships with customers through high-quality products that meet their needs at competitive prices, along with accurate information and exceptional service.

We believe in, and strive to keep, communication channels open for constant customer feedback.

We hired J.D. Power to perform a customer satisfaction survey during the year. The customer satisfaction index average score for 2022 was 84.82%. Though no survey was conducted in 2023, it will resume in 2024.

c. Personnel:

All our personnel, including those at subsidiaries, are valuable assets critical to our growth and profitability. We strive to provide a quality-oriented work environment with the utmost focus on safety together with fair and equitable compensation compatible with similar businesses.

We have comprehensive policies on compensation and benefits for employees globally. They follow the local rules and regulations of the country where operations are based.

We value employee development and endeavor to create a diverse work environment that attracts and retains high-performing employees. Our new hires participate in an orientation program and ongoing skill development opportunities.

The details of The Company's compensation and training activities are provided below in the "People" section at the end of this report.

d. Suppliers:

Indorama Ventures prioritizes ethical and mutually beneficial relationships with suppliers who operate in a fair, honest, and socially responsible manner. Our suppliers are expected to meet government regulations and agreed-upon safety and quality standards to ensure consumer trust in our products.

We expect our suppliers to align with our commitment to responsible resource use, waste reduction, low carbon impact, and offering eco-friendly products while following environmental regulations.

They should ensure that they adopt and implement acceptable safety, product quality, labor, and human rights policies, social and legal principles, in line with our own policies and manage these issues within their business for any goods or services supplied to us.

We have set ethical boundaries for ourselves and expect our suppliers to also be complying, acting with integrity and lawfully when managing competitive data, proprietary information, and other intellectual property, in addition to complying with legal requirements regarding competition, antitrust, and accurate and truthful marketing.

In 2022, the Supplier Code of Conduct was revised and renamed to the 'Responsible Sourcing Policy' and was translated into 14 languages in 2023.

e. Creditors:

Our Company is committed to fulfilling all contractual obligations and financial responsibilities with transparency and integrity, including maintaining punctual payment and quality of collateral. Together with our subsidiaries, we attempt to provide our creditors with full and accurate information about our progress, as required, through an ongoing face-to-face and group sessions and quarterly financial disclosure on our website for smooth dealings and to comply with all our obligations.

We will promptly notify our creditors of any inability to meet our obligations and work towards mutually acceptable solutions.

Moreover, we want to see our creditors adhere to business principles consistent with our own and ensure that their products and services are produced and delivered to comply with all legislation relevant to their business in the areas where they operate.

During 2023, the Company hosted creditor visits to its factories in Rayong and Nakhon Pathom, Thailand and Houston, the U.S., offering firsthand insights into its operations and fostering transparent corporate relationships.

f. Competitors:

Indorama Ventures and our subsidiaries will act within the rules with respect to our competitors and employ best practices in dealing with them, as well as working towards market development and growth for the benefit of the industry.

g. Government:

We honor our relationships with governments and regulatory authorities in all of the jurisdictions where we operate and will comply with their instructions, statutory requirements and applicable laws concerning all aspects of our businesses.

h. Media:

We provide accurate and relevant information to the media as they play a vital role in communicating information about our company to the public. Whereas the Corporate Communications Department acts as a liaison with the media to provide information, only authorized spokespersons may be interviewed or speak on behalf of the Company.

i. Community, Environment and Society:

We care deeply about the safety of society, the environment, and the quality of life of people associated with our operations worldwide and strive to comply with applicable laws and regulations. We actively support environmental practices and cultural diversity through community engagement.

We treat and dispose of waste in a manner that will have the least impact on society, the environment, and people.

We have taken steps to strengthen our sustainability, in addition to benefits to the communities where we operate. We want to ensure:

- A consistent supply of high-quality products and services to our customers
- We create value for our investors.
- We provide a favorable work environment.
- We are a good community neighbor.
- We minimize the environmental footprint we leave behind.

Our employees are encouraged to get involved in local environmental projects; especially those aligned with our CSR strategy. We also provide relevant training to our employees so they have a clearer understanding of environmental topics related to our business and can help reduce environmental impacts.

We cooperate on various waste management initiatives conducted by the private and public sectors and run an education program for communities to promote correct waste management methods.

We are committed to meeting and surpassing the environmental laws and regulations of each business and region, with periodic analysis and third-party inspections conducted in each plant.

j. Code of Conduct:

The Manual has one unified code for both directors and employees. The Company adheres to ethical standards, honesty, and accountability through its Code of Conduct. Training of the Code of Conduct is embedded in the Manual training. The Manual outlines our vision, mission and values as a responsible industry leader and a world-class chemical company, and its corporate governance principles that balance stakeholders' interests. The Code of Conduct contains policies on ethical practices, fair business practices, workplace values, and the treatment of stakeholders. Finally, the Whistleblower Policy provides information on how employees and stakeholders can file a whistleblower report and how the process is managed.

In 2023, four policies in the Manual underwent review and updates, detailed in respective sections, reaffirming our commitment to robust governance.

k. Anti-Corruption and Bribery:

The Manual explains Indorama Ventures' strong position against bribery and corruption. As a global company, we must follow the highest standards of governance. For the year 2023, the Board of Directors approved the updated Manual emphasizing our firm stance against bribery and corruption. We incorporated new sections on 'Potential Red Flags' and 'Third Parties and Due Diligence.' Additionally, we included a guideline addressing the employment of current or former government employees. Our intention is to ensure that we have the necessary systems and controls in place to implement preventive actions against potential risks.

We also adhere to all local, national, and international laws as appropriate.

Indorama Ventures is the certified company of Thailand's Collective Action Coalition Against Corruption (CAC). The CAC certification was first received in 2014 and successfully renewed for a second time in March 2021 for another three years. In 2023, with assistance from our Internal Audit department to conduct reviews of anti-corruption practices at the units, all documents have been prepared and already submitted to CAC for the third renewal in 2024.

Having adopted an anti-corruption framework, including policy awareness and implementation of compliance, we have created a strong anti-corruption culture and will be continuing as a CAC certified company in Thailand.

The Anti-Corruption Assistance Package was created in 2020 to aid all units in adhering to widely accepted anti-corruption frameworks. It includes a checklist, guidelines, and template of corruption risk assessment to support our Anti-Corruption Policy and helps local units strengthen their anti-corruption systems. The Assistance Package, now available on the CG Database, has been well-received and will reinforce the anti-corruption culture at Indorama Ventures. Management at local units are provided detailed training to ensure comprehensive understanding.

We hold anti-corruption training sessions for employees in local languages, emphasizing our zero-tolerance approach and provide practical guidelines for handling potential corruption incidents. Our Anti-Corruption Policy and training materials are widely distributed, including on our company intranet, to ensure uniform implementation and understanding worldwide. The CGPAC team regularly monitors training progress and feedback. Our Internal Audit department conducts reviews of the anti-corruption practices at the units and functions and reports findings to the Audit Committee to ensure continued policy compliance.

In 2023, on-site training sessions on Anti-Corruption Policy were held at factories in Thailand, four locations in Indonesia, five locations in India and two locations in Philippines as part of the manual training and updates. The training focused on the updates of the Manual, such as Potential Red Flags and Third Parties and Due Diligence, key anti-corruption controls, caution when interacting with current or former government officials, and how employees can make protected disclosures to the Whistleblower Committee if they become aware of corruption within their unit. Employee engagement was high during these sessions.

Demonstrating our proactive anti-corruption commitment, the Company hosted a visit from the Sanya Dharmasakti National Anti-Corruption Institute, under the Office of the National Anti-Corruption Commission (ONACC) at Indorama Polyester Industries, Rayong in March 2023. We shared our robust corporate governance program and anti-corruption practices with approximately 100 senior-level officers from the public sector and state-owned enterprises, underscoring our leadership in ethical business practices within Thailand.

l. Human Rights Policy:

Indorama Ventures upholds human rights and adheres to the Universal Declaration of Human Rights and its covenants, the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social, and Cultural Rights. As we strive to prevent human rights violations and comply with relevant laws in the countries we operate, in 2023, we added the section on 'Modern Slavery and Human Trafficking' to ensure that such concerns are not taking place within our company or in our supply chain. We also expect our suppliers to hold their own suppliers to the same high standard.

The Company will not tolerate any human rights violations. We encourage all employees and stakeholders to report any incidents via available channels, including our whistleblower channel. Breaches of this policy, such as illegal child or slave labor, discrimination, bullying and harassment, will result in disciplinary action in accordance with local laws and regulations.

In 2023, the Company continued the Declaration on Human Rights initiative. All Business Heads and Site Heads were requested to sign the declaration to ensure compliance with the Human Rights Policy. The declaration, submitted annually, serves to monitor compliance across all levels of operations and identify areas for improvement. In case of non-compliance, Business Heads and Site Heads must report details and remedial action. The Internal Audit Department will assess human rights practices based on the declaration, with results reported to the NCCG Committee and Board. The Company will take the necessary measures to assist employees if their human rights are violated.

100% of Business Heads and Site Heads reported no material breaches in 2023.

The CGPAC Team conducted on-site and online trainings on Human Rights Policy at factories both locally and abroad throughout 2023, to discuss how managers can contribute to the prevention of human rights violations and how to report any non-compliance found.

m. Conflict of Interest:

The Manual emphasizes that Indorama Ventures' directors and employees should not put themselves or allow their relatives to be put in a position where their interests conflict, directly or indirectly, with those of the Company.

Directors must not be a partner in an ordinary partnership or one with unlimited liability in a limited partnership, nor hold a directorship in a private or public company that operates a business of the same nature as,

or competing with. The Company unless they have notified a shareholders' meeting prior to the resolution to appoint them as director.

Directors and senior management must fully disclose information about company securities holdings as required by the regulations.

In 2023, the CGPAC Team visited units in Thailand to communicate the guidelines of managing any conflict of interest. The CGPAC Team also informed the units overseas about the Conflict of Interest Assistance Package, which was developed in 2021 to assist units on the implementation of a Conflict of Interest Policy. The summary of the policy was also included in CG Manual Summary videos which have been shared to all units.

In 2023, there was no material case regarding conflict of interest. Any minor non-compliance with our Conflict of Interest Policy was appropriately investigated and managed.

n. IT Security Policy:

The IT security policy is designed to ensure the confidentiality, integrity, and availability of our information systems and data. The policy covers all aspects of information security, including physical security, network security, access control, and outlines the responsibilities of employees in handling sensitive information. Indorama Ventures has implemented the ISO27001 standard, which is a widely recognized international standard for information security management.

Start from 2022, our IT leadership committed itself to ensuring the effective implementation of our IT security policy. The Board of Directors supports this commitment, through the SRMC, who recognizes the importance of protecting our information systems and data in today's rapidly evolving technological landscape. As part of our implementation efforts, we will continue to apply measures such as employee awareness training, access controls, end point and network security measures, physical security measures, and incident response planning.

Start from 2023 project Quasar initiated to strengthen cybersecurity with Siem-Soc for critical alert and event monitoring and prevention at early stage.

We will also comply with relevant laws and regulations, such as the Personal Data Protection Act in Thailand, and regularly review and update the IT security policy as needed. Our commitment to protecting our information and ensuring the ongoing success of the Company through the implementation of this policy will remain a priority, with the support of the IT leadership and the Board of Directors.

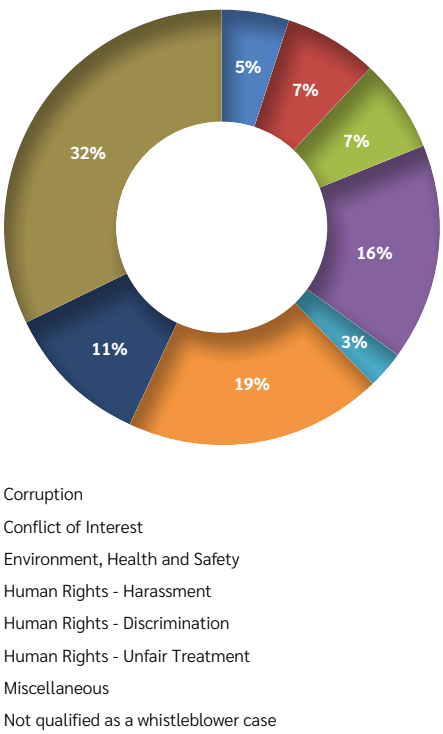
o. Whistleblower Policy:

Indorama Ventures upholds a robust Whistleblower Policy, empowering employees, and external stakeholders to report ethical concerns or violations of the law anonymously. This globally communicated policy, accessible on our website, allows reporting via email (ethics@indorama.net) or a secure website (whistleblower.indoramaventures.com). Whistleblowers can choose their most convenient channel. The Whistleblower Committee ensures identity protection and immunity from retaliation. This commitment resonates across all business units.

In 2023, the Company enhanced the Whistleblower Policy by providing more detailed information regarding non-retaliation and reports made in good faith. This emphasizes the importance of maintaining the integrity of whistleblower reports.

In 2023, the Whistleblower Committee received 74 complaints. Of these 50 were qualified as whistleblower cases – 16 were substantiated complaints, 14 were unsubstantiated complaints, five lacked sufficient information to start an investigation and 15 are still under investigation. The Whistleblower Committee, following investigations, take corrective action, such as adjustments to relevant procedures, more training on the relevant policies, issue warnings and termination of services for some wrongdoers, with support from local management as required. All cases carried over from 2022 have been resolved. The chart below depicts the categories of cases in 2023. A summary of the investigations and the actions taken were reported to the Audit Commitee, the NCCG Committee and the Board of Directors.

Category of Whistleblower Reports Received in 2023



The Whistleblower Committee held monthly meetings and as required, invited senior executives from HR, Internal Audit, businesses and third parties to assist them in their investigation process. Timely replies on the status of the complaints were made to the whistleblowers. The Committee engaged in-house counsel in the investigation process to further strengthen the process and procedures over the forthcoming year. Compared to 2022, the significant increase in the number of reports reflects the enhanced awareness of the whistleblower mechanism among our employees, which has been reinforced through training.

The Whistleblower Policy and the reporting website are EU General Data Protection Regulation (GDPR) compliant. In February 2022, the

Whistleblower Privacy Statement was updated to comply with the Personal Data Protection Act 2022 (PDPA).

The channels to communicate with the Whistleblower Committee are highlighted in the "Corporate Governance" section of our website.

p. Personal Data Protection:

With our deep commitment and collective efforts on compliance with all applicable laws and regulations, the Company has diligently been working on implementing various measures to ensure that Indorama Ventures, and relevant affiliates and subsidiaries, comply to Thailand's Personal Data Protection Act B.E. 2562 (2019) ("PDPA") which has come into effect on 1 June 2022.

In 2023, Indorama Ventures' ongoing commitment to adhering to the PDPA, initiated in 2021 and continuing to the present, encompasses several key initiatives. These include the procurement of external consultancy services to ensure PDPA compliance, the proclamation of the Indorama Ventures Privacy Policy, privacy contact channel, the implementation of extensive workshops and training programs in both Thai and English and other compliance practices and policies for all our entities in Thailand. In accordance with PDPA requirements, the Company has designated Ms. Ploypatchara Chochai as the Data Protection Officer.

Moreover, we are committed to aligning with international personal data protection standards, notably the General Data Protection Regulation (GDPR), widely recognized as the pinnacle of privacy compliance worldwide. Our unwavering dedication to complying with all relevant laws and regulations pertaining to personal data protection is a testament to our prioritization of data protection at both the domestic and international levels.

q. Non-compliance with policies and guidelines:

Any individual who disregards or willfully breaches the Manual, including, but not limited to, illegal behavior that may not be explicitly stated in the Manual, will be subject to local laws and regulations. The Company may act against the individual as permitted by law.

r. Policy Review

The following CG policies were revised and approved by the Board and uploaded on the Company's website and changes made to the CG Manual.

- Human Rights Policy, 24 February 2023
- Whistleblower Policy, 24 February 2023
- Anti-Corruption Policy, 24 February 2023
- Intellectual Property Policy, 24 February 2023

In pursuit of good governance, the following policy was revised and adopted.

- Reporting of Holding of and Trading in Indorama Ventures Security Policy, 24 February 2023

9.1.3 Disclosures and Transparency

Our policy is to deliver all important and relevant Company information, both financial and non-financial, that may impact the interests of shareholders or investment decisions. All information is disclosed in a timely manner through easy-to-access channels and complies with the rules of the SEC/SET.

The communications channels used are Form 56-1 One Report, SET's website, Management Discussion and Analysis (MD&A), press releases, shareholders' meetings, analysts' meetings, and our own website.

The designated executives that can disclose information about Indorama Ventures include the Group Chief Executive Officer (Group CEO), the Company Secretary Department, the Investor Relations Department and Corporate Communications Department. They provide information, such as through one-on-one meetings with shareholders, creditors, analysts, and quarterly meetings with analysts to discuss our recent financial performance, road shows and other highlights.

The NCCG Charter defines the policy for the nomination of Directors of the Company and the policy on remuneration of Directors and management of the Company.

The key highlights of the policy and criteria for nomination and remuneration are stated in the section above on the **Appointment of New Directors, Reappointment of Retiring Directors, and Approving the Remuneration of Directors**.

For the remuneration of management, the policy and criteria are stated below in the "Executive Director, Group CEO and Management Remuneration" section under Responsibility of the Board.

The Company has the following Charters:

- Board of Directors Charter
- Audit Committee Charter
- Nomination, Compensation and Corporate Governance Committee Charter
- Sustainability and Risk Management Committee Charter

The respective committees review their Charters to ensure alignment with best practices and are presented to the Board for approval. The following were revised and approved by the Board based on the recommendations of the respective committees.

- Nomination, Compensation and Corporate Governance Committee Charter, 15 August 2023
- Audit Committee Charter, 15 August 2023
- Sustainability and Risk Management Committee Charter, 15 August 2023

The revised Charters were uploaded onto our website.

Further details of the charters can be found in "Appendix 6" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

The Board reviews our Vision, Mission and Values Statement and makes changes deemed necessary. The last approval by the Board was in August 2021.

The Company's website, in both Thai and English, is a priority for the Company, and regularly reviewed to ensure that all the information provided is current and up to date.

In 2023 - and all previous - years, the Company has never breached SEC/ SET disclosure rules and regulations. The following information is regularly updated on our website:

Vision, Mission, Value Statements, financial statements, analyst reports, press and SET releases, Form 56-1 One Report, corporate policies, corporate structure, details of subsidiaries, Indorama Ventures Board and management structure, shareholding structure and major shareholders.

The Form 56-1 One Report is updated annually and includes detailed information on business operations, financial status, risks, litigation, and capital structure, including information on ultimate shareholding. Indorama Ventures maintains a calendar of all major events that investors or shareholders may wish to attend. Furthermore, the Company implements recommendations made by the SEC, SET and IOD.

Indorama Ventures has an investor relations department to disclose information to investors relating to financial reporting and others. An annual investor relations plan includes various investor relations activities by the executive in charge, including periodic plant visits by shareholders, investors, and analysts, as well as other regular investor meetings.

To contact the Company's Investor Relations Department, the public may call (+66) 2 661 6661 ext. 134 or email ir@indorama.net. The IR section of the website contains much information and contact details.

In 2023, the IR Team organized site visits for analysts to our manufacturing facilities both domestically and internationally. These visits included factories in Brazil, as well as facilities located in the provinces of Rayong and Nakhon Pathom

The Annual Report contains a statement of the Board's responsibility concerning the Company's financial report, which mentions, among other things, that the Company complies with generally accepted accounting principles (GAAP). And that accounting standards and practices used are appropriate and consistent with the nature of the business. It also affirms that all information presented in the financial reports is accurate, complete, and adequate. The Chairman of the Board and the Group CEO sign the statement.

The individual shareholdings of Directors, Management including their spouses and minor children for the period 1 January 2023, to 31 December 2023, are as follows:

Name	Number of Ordinary Shares			
	As of 1 Jan 2023	As of 31 Dec 2023	Increase/ Decrease shares during the year (share)	Percentage
1. Mr. Sri Prakash Lohia	-	-	-	-
spouse and minor children	-	-	-	-
2. Mr. Aloke Lohia	1,000,010	1,000,010	-	0.018
spouse and minor children	-	-	-	-
3. Mrs. Suchitra Lohia	-	-	-	-
spouse and minor children	1,000,010	1,000,010	-	0.018
4. Mr. Amit Lohia	-	-	-	-
spouse and minor children	-	-	-	-
5. Mr. Yashovardhan Lohia	-	-	-	-
spouse and minor children	-	-	-	-
6. Mr. Dilip Kumar Agarwal	564,773	564,773	-	0.010
spouse and minor children	-	-	-	-
7. Mr. Sanjay Ahuja	135,131	135,131	-	0.002
spouse and minor children	-	-	-	-
8. Mr. Rathian Srimongkol	991,400	991,400	-	0.018
spouse and minor children	-	-	-	-
9. Mr. Russell Leighton Kekuewa	750,000	750,000	-	0.013
spouse and minor children	-	-	-	-
10. Mr. Tevin Vongvanich	100,000	200,000	100,000	0.004
spouse and minor children	-	-	-	-
11. Mrs. Kaisri Nuengsigkapian	-	-	-	-
spouse and minor children	-	-	-	-

Name	Number of Ordinary Shares			
	As of 1 Jan 2023	As of 31 Dec 2023	Increase/ Decrease shares during the year (share)	Percentage
12. Dr. Harald Link	2,000,000	2,000,000	-	0.036
spouse and minor children	-	-	-	-

Reporting

Indorama Ventures has a reporting policy in place for all directors and management, who must report their shareholding every quarter to the Company Secretary, who then writes a summary for the Board. The shareholding includes themselves, their spouses and minor children and any trading in the company securities must be reported to the Company Secretary under SEC regulations. Indorama Ventures has set a blackout period for trading in the company securities. Every quarter, the Company's Secretarial Department informs the Directors and Management of the blackout period.

All Indorama Ventures directors and management are required to report their interest, if any, in the Company's designated "Declaration of Interest" form at the beginning of each year. Such forms are kept by the Company Secretary's department.

9.1.4 Responsibility of the Board

a. Responsibility and Duties of the Board of Directors

The Board of Directors of Indorama Ventures are responsible for the Company's vision, mission, value statement, plans, strategies, key policies, and budgets with a view to effectively and efficiently managing the business for maximum shareholder value. Detailed budgets and plans are formulated for the Company and its subsidiaries. The Board closely monitors the management and implementation of business plans to achieve targets, and sets internal controls and audit procedures, including risk management. All major CAPEX requires the approval of the Board. Detailed presentations are made by the respective business segment head.

At the beginning of each year, the Board holds a "Global Management Conference (GMC) and Annual Business Plan" meeting and at the meeting, the Vision and Mission statement is reviewed along with the strategies presented by management. At the strategy meeting, key executives from all Indorama Ventures units participate and discuss their performance and strategies both in the short and long-term with senior management and Board members. Such meetings give the Board and especially the Independent Directors many opportunities to discuss and interact with the respective executives about their business plans and performance and to also understand the various businesses that the Company operates. Where necessary, suggestions are made by the Board.

After the business segments' plans are all presented, the Board of Directors approve the annual plan. At the Board meetings and other informal meetings with the Group CEO and senior management, the Board is updated on the Company's business performance, strategy vis-à-vis targets and industry trends. The Board then provides their thoughts and recommendations. Management updates are based on Executive Committee meetings that each business segment holds about its operating performance.

Further details of roles and responsibilities of the Board can be found in "Appendix 7" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

Board Approvals

The average attendance for Board meetings held in 2023 was approximately 98.67%. For the annual budget approval, attendance was 100%. For each agenda item at Board meetings, detailed discussions take place and approvals are given unanimously.

The Board requires each business head to explain the details of why their business fell below target and their plans to improve performance. The Board follows up on the plan status in subsequent meetings.

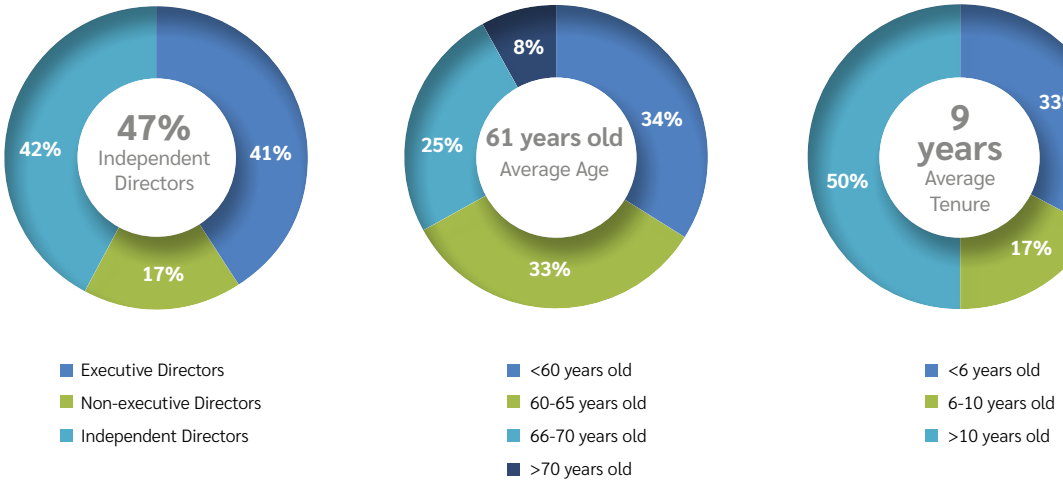
The Board has guidelines on stakeholder business ethics as a part of the policies issued by the Company and monitors the effective implementation of good business practices and ethics by customer and supplier surveys and the results of employee training feedback surveys.

The Board, through the audit committee, internal auditor and corporate compliance department, reviews potential conflicts of interest. Indorama Ventures's internal guidelines on related party transactions and the rules and regulations of the SET/SEC provide a basis for avoiding conflicts of interest. Details of all related party transactions are updated in Form 56-1 One Report. Those Board members who have an interest in a matter that may involve a conflict of interest must abstain from voting and other involvement, as prescribed by the Board. Company policy prohibits personnel at all levels from using inside information for their personal benefit with all business decisions based on achieving the maximum benefit for the Company and its subsidiaries.

Every year, the Audit Committee reviews the Evaluation Form – Sufficiency of Internal Control Systems for the Company and its subsidiaries and forwards it to the Board for evaluation.

The Board, at the Global Management Conference meeting in January, meets and interacts with senior executives from around the world.

b. Board Structure



In 2023, the number of directors was reduced from 15 to 12 at the Annual General meeting. The Board consists of five Executive Directors, two Non-Executive Directors and five Independent Directors. The Board, which is diverse based on nationality, gender, age, and skills, does not discriminate and hires according to availability and qualifications. The current composition of the Board includes two female directors.

The Board's structure is appropriate relative to the size of the Company, geographic spread, number of Executive, Non-Executive and Independent Directors and qualifications in terms of knowledge and expertise and provides a fair balance of power and effective management monitoring. The Company intends to maintain this broad base of knowledge and experience when it searches for new Directors in the future. The Board has a policy of seeking the services of a professional search firm when necessary to replace or nominate a new director.

Role and Responsibility of the Chairman

The principal role of the Chairman of the Board is to ensure that the Board is effective in setting and implementing the Company's direction and strategy.

The Chairman plays a pivotal leadership role in ensuring that the Board works effectively. Further details of role and responsibility of the Chairman can be found in "Appendix 7" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

In the Annual Report and website Directors' profile, Indorama Ventures discloses its director's names, profiles, qualifications, experiences, and shareholdings in the Company to demonstrate the Board's knowledge, competence, qualifications, and experience. It also mentions which Director is independent, executive, non-executive or represents a major shareholder.

The profile mentions the Board membership(s) of other companies held by the Directors.

The Board appointed a Company Secretary to ensure that all the requirements and regulations of the SEC/SET are met. The Company Secretary is responsible for matters connected with Board and shareholders meetings and to advise and apprise the Board of relevant laws and regulations, to administer the Board's activities and ensure Board compliance with shareholders' resolutions. Further details can be found in "Appendix 7" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

c. Other Directorships

The Board Charter specifies the outside Directorship for Executive, Non-Executive, and Independent Directors.

None of the Directors of Indorama Ventures have breached the above Directorship criteria in 2023.

d. Retirement of Directors

One third of the Directors retire by rotation at every Annual General Meeting as specified in the Company's Articles of Association. A retiring director is eligible for re-election. Voting for appointment/re-appointment of Directors is done individually. The Company provides a detailed profile of the retiring Director who has given his/her consent to be reappointed in the Notice to the Shareholders' Meeting.

The Board and the NCCG Committee, after due deliberation, have acknowledged that the industry is extremely complex and requires many years of study to be able to play a role on the Board. The current independent directors have shown their value over the years and will continue to play a key role in the Company. Replacing independent directors with many years of industry experience would seriously hinder the Board's ability to operate at an optimal level. However, they all take their independence seriously.

The Board of Directors has, therefore, not limited the term of an independent director to not more than nine consecutive years as recommended by the Thai IOD.

However, the NCCG Committee and the Board will take into consideration the IOD recommendation of independent directors' term of service and will decide annually if certain director(s) will retire based on additional criteria, i.e., expertise in our business, contribution by the director, health of the individual as well as the availability of a suitable replacement director. In 2018, the Board set the retirement age of Independent Directors at 72.

e. Evaluation of Board and sub-committee Performance

The Board and sub-committee members conducted a self-evaluation of the Board and sub-committees' performance in 2023. The results were summarized and discussed at the Board meeting held in February 2024. The Board and subcommittee members were evaluated as having given a particularly good performance rating in 2023.

For the self-evaluation of the Board, the Company follows the guideline prescribed by the SET, which is based on the following six criteria: a) structure and characteristics of the Board; b) role and responsibilities of the Board; c) Board meetings; d) The Board's performance of duties; e) relationship with management; f) self-development of directors and executive development.

The Company Secretary department issues an evaluation form to each Director at the end of each year to collect feedback and comments, summarize them and presenting to the Board for their consideration and any action required.

The average self-evaluation resulted in a score of 98%. (4.9 out of 5).

The sub-committees conduct a similar evaluation.

f. Functional Performance

The Board of Directors held five meetings in 2023. The Company proposes scheduling a minimum of five meetings a year. Typically, a meeting is convened every three months with extra meetings convened as and when necessary to review operations, financial matters, plans, or other matters. Prior to the close of each year, a schedule of meetings for the next year is circulated to members to fix the meeting dates in advance and to ensure maximum participation.

Under the Chairmanship of Mr. Rathian Srimongkol, Lead Independent Director, all the independent Directors met on 7 February 2023, to review and discuss the Company's performance and other matters. A similar meeting of the Independent Directors was held on 8 February 2024. The Lead Independent Director updated the Group CEO on the outcome of their meeting for management to act accordingly.

The Chairman, Group CEO, Lead Independent Director, and Company Secretary set the Board meeting agenda, and the Company Secretary sends invitation letters together with the agenda and relevant documents to the Directors at least seven days prior to the meeting to allow adequate time for the Directors to study the information.

At each Board Meeting, the Chairman allows each director to express his or her views. Management will answer all queries. Directors may request additional information from a designated person.

Detailed minutes are prepared for each meeting, including: the meeting date; commencement and completion times, names of those who attended or were absent; summary proposals to the Board on each issue, a brief report of the discussion, director's observations and the person authorizing the minutes. A summary of the minutes of subsidiary companies is provided to Board members as requested. The minutes are circulated within 14 days of Board meetings.

The following are the details of attendance of the Board of Directors' meeting in 2023.

Meetings in 2023									
No.	Name	Board of Directors 5 times			Audit Committee 6 times	NCCG Committee 3 times	SRMC Committee 4 times	Independent Directors 1 time	E-AGM 2023 1 time
		Online Meeting	Physical Meeting	% of attendance					
1	Mr. Sri Prakash Lohia	4	1	100%					1/1
2	Mr. Aloke Lohia	0	5	100%			4/4		1/1
3	Mrs. Suchitra Lohia	1	4	100%					1/1
4	Mr. Amit Lohia	3	2	100%					1/1
5	Mr. Yashovardhan Lohia	1	4	100%			2/4		1/1
6	Mr. Dilip Kumar Agarwal	1	4	100%			4/4		1/1
7	Mr. Udey Paul Singh Gill*	1	1	100%			1/1		1/1
8	Mr. Sanjay Ahuja**	0	5	100%			2/2		1/1
9	Mr. Rathian Srimongkol	0	5	100%	6/6		4/4	1/1	1/1
10	Dr. Siri Ganjarerndee*	0	2	100%	2/2	1/1		1/1	1/1
11	Mr. Kanit Si*	1	1	100%		1/1	1/1	1/1	1/1
12	Mr. Russell Leighton Kekuawa	1	4	100%		3/3	4/4	1/1	1/1
13	Mr. Tevin Vongvanich	2	2	80%	6/6		4/4	1/1	1/1
14	Mrs. Kaisri*** Nuengsigkapian	2	3	100%	4/4	3/3		1/1	1/1
15	Dr. Harald Link	2	3	100%		2/3		1/1	1/1

Remark: * Mr. Udey Paul Singh Gill, Dr. Siri Ganjarerndee and Mr. Kanit Si retired by rotation at Annual General Meeting no.1/2023, effective from 25 April 2023

** Mr. Sanjay Ahuja was appointed as a member of the Sustainability and Risk Management Committee, effective from 15 May 2023

*** Mrs. Kaisri Nuengsigkapian was appointed as a member of the Audit Committee, in place of Dr. Siri Ganjarerndee, effective from 25 April 2023.

g. Performance Measurement of Executive Directors, Group CEO and Management

The Group CEO and other executive Directors have their key performance indicators (KPIs) set by the Board on the recommendation of the NCCG committee. This takes the form of a balanced scorecard. At the end of each year, their performance is used in the calculation of their compensation.

For senior management executives, the NCCG Committee reviews and approves on an annual basis the evaluation process and compensation structure and assigns the Human Resources department to approve the annual compensation, including salary, bonus, and non-equity incentive compensation. Similarly, line managers follow the same principles when evaluating their staff.

Details discussed in the *"Executive Director, Group CEO and Management Remuneration"* section are below.

h. Remuneration of the Board of Directors and Sub-Committees

The current remuneration of Independent Directors and Non-Executive Directors, including the bonus, is established based on assignments and responsibilities. Such remuneration proposed by the Board and recommended by the NCCG Committee requires approval at the shareholders' meeting.

The policy and criteria followed by the NCCG Committee has been explained above in the section on Approving Directors Remuneration.

In 2023, the total annual remuneration approved at the Annual General Meeting of Shareholders No. 1/2023 held on 25 April 2023, was an amount not exceeding 33,500,000 baht.

The actual remuneration paid in 2023 was 33,140,000 baht against the approved amount of 33,500,000 baht. The details of the remuneration paid are hereunder:

The Remuneration for the Board of Directors and the Sub-committees in 2023[1]								
No.	Director	Amount Approved (Baht)	Retainer fee[2]	Audit Committee[3]	Nomination, Compensation and Corporate Governance Committee[4]	Sustainability and Risk Management Commiitee[5]	Bonus for Performance in 2022 (Paid in 2023)	Total Actual Paid (Baht)
1.	Mr. SP Lohia	3,070,150	1,100,000				1,970,150	3,070,150
2.	Mr. Aloke Lohia	1,970,150					1,970,150	1,970,150
3.	Mrs. Suchitra Lohia	1,313,430					1,313,430	1,313,430
4.	Mr. Amit Lohia	2,153,430	840,000				1,313,430	2,153,430
5.	Mr. Yashovardhan Lohia	1,313,430					1,313,430	1,313,430
6.	Mr. Dilip Kumar Agarwal	1,313,430					1,313,430	1,313,430
7.	Mr. Udey Paul Singh Gill	1,313,430					1,313,430	1,313,430
8.	Mr. Sanjay Ahuja	1,313,430					1,313,430	1,313,430
9.	Mr. Rathian Srimongkol	4,050,150	880,000	900,000		300,000	1,970,150	4,050,150
10.	Mr. William Ellwood Heinecke[6]	328,360					328,360	328,360
11.	Dr. Siri Ganjarerndee[7]	1,853,430	240,000	200,000	100,000		1,313,430	1,853,430
12.	Mr. Kanit Si[7]	1,753,430	240,000		100,000	100,000	1,313,430	1,753,430
13.	Mr. Russell Leighton Kekuewa	3,241,790	880,000		420,000	300,000	1,641,790	3,241,790
14.	Mr. Tevin Vongvanich	3,093,430	880,000	600,000		300,000	1,313,430	3,093,430
15.	Mrs. Kaisri Nuengsigkapain[8]	2,893,430	880,000	400,000	300,000		1,313,430	2,893,430
16.	Dr. Harald Link	2,165,100	880,000		300,000		985,100	2,165,100
Total		**33,140,000**						**33,140,000**

Remark: [1] Executive Directors on the IVL Board and Sub-Committees are not paid any retainer fee.

[2] Retainer Fee for Chairman of the Board 100,000 Baht per month, for Independent Directors and Non-executive Director, the fee increased to 80,000 Baht per month with effect from 1 May 2023

[3] 75,000 Baht per month for Chairman and 50,000 Baht for members (Audit Committee)

[4] 35,000 Baht per month for Chairman and 25,000 Baht for members (NCCG Committee)

[5] 25,000 Baht per month to independent directors as a member (SRMC Committee)

[6] Mr. William Ellwood Heinecke retired at AGM 2022, held on 26 April 2022

[7] Dr. Siri Ganjarerndee and Mr. Kanit Si's remunerations were payable up to April 2023

[8] Mrs. Kaisri Nuengsigkapian's remuneration was payable from May 2023 for Audit Committee

i. Remuneration of Executives

The key principles followed by the NCCG Committee in determining the compensation are:

- To review and approve annually the evaluation process and compensation structure for the Company's Executive Directors. The Committee evaluates their performance and approves their annual compensation, including salary, bonus, and non-equity incentive compensation for them based on initial recommendations from the Group CEO.
- To review and approve annually the corporate goals and objectives (KPIs) with respect to compensation for the Group Chief Executive Officer. The Committee shall evaluate, at least annually, the Group Chief Executive Officer's performance in light of these established goals and objectives. And, based upon these evaluations, shall set the Group Chief Executive Officer's annual compensation, including salary, bonus, and non-equity incentives (if any).
- To review and approve the evaluation process and compensation structure for the senior executives annually. The Committee shall approve or may assign the Human Resources department to approve

the annual compensation, including salary, bonus, equity, and non-equity incentive compensation for senior executives.

- Base salaries for Group CEO and Executive Directors depend on the scope of their responsibilities, their capabilities, and the period over which they have performed these responsibilities.
- Annual bonuses and the percentage change from the prior year's bonus for senior executive officers are determined after an evaluation of the performance of the Company, the performance of the businesses or functions that the officer leads and an assessment of each officer's performance against expectations, which were established at the beginning of the year. The bonuses also reflect (and are proportionate to) the annual financial results of the Company.
- Other non-equity compensation is paid as per the HR manual of the Company, which is reviewed from time to time.

(The remuneration of Indorama Ventures Executives in 2023 was approximately 503.6 million baht.

a. Details of remuneration paid to Mr. Aloke Lohia and Mr. DK Agarwal are as follows:

(Million Baht)

No.	Name/ Position	2021			2022			2023		
		Salary	Bonus and perquisites	Total	Salary	Bonus and perquisites	Total	Salary	Bonus and perquisites	Total
1.	Mr. Aloke Lohia, Group CEO	42.80	53.07	95.87	51.47	67.20	118.67	58.63	67.27	125.90
2.	Mr. Dilip Kumar Agarwal, Deputy GCEO, Executive President: C-PET (Ad Interim) and CFO (Ad Interim)	60.75	41.50	102.25	69.97	59.27	129.24	74.25	56.57	130.82

b. Details of the remuneration of other Executive Directors and Indorama Management Council (IMC) members, consisting of Mrs. Suchitra Lohia, Mr. Udey Gill*, Mr. Sanjay Ahuja, Mr. Yashovardhan Lohia, Mr. Alastair Mark Port, Mr. Christopher Anthony Kenneally, and Mr. Klaus Holz are as follows:

(Million Baht)

2021			2022			2023		
Salary	Bonus and perquisites	Total	Salary	Bonus and perquisites	Total	Salary	Bonus and perquisites	Total
82.23	68.53	150.76	143.17	100.25	243.42	165.87	81.00	246.87

* Remark: Mr. Udey Gill retired from the Company at the end of April 2023, so his remuneration was calculated proportionately for only four months.

The remuneration above is in accordance with the Company's rules and regulations. The Board/NCCG Committee sets the long and short-term KPIs for the Group CEO, Deputy GCEO'S and Executive Presidents of Combined PET, IOD and Fibers business.

No compensation was paid to Directors in the form of shares.

j. Succession Planning

The NCCG Committee has put in place a succession plan for the Group CEO and key management team in consultation with the Board taking into consideration knowledge, potential and performance evaluations.

For all other employees, the Global HR department works with line management to create succession plans. To ensure that the succession plans are effective, the Global HR department implements employee development and training as well as a fast-track process for those it believes have high potential.

k. Group Management Conference

The Company holds one Board meeting every year to approve the Company's strategy and Annual Business Plan at the Global Management Conference (GMC) along with the Board and Senior leadership team globally. The GMC for 2023 was held from 23-27 January in Bangkok.

l. Professional Development of Directors and Management

Directors who recently joined the Company are given a Directors Orientation folder with complete information about the Company and its subsidiaries to assist them in getting well-acquainted with its business, practices and procedures and their rights, duties, and obligations as a director. In addition to the orientation, meetings are arranged with the management team members.

Apart from the periodic informal meetings with the management teams, the Directors are invited to attend the various business meetings held during the year.

Continuous knowledge expansion

The Board encourages directors, Audit Committee members, management team members, the Company Secretary, and Internal Auditor to attend

seminars, training and courses which would assist in further improving their contribution/performance in the Company. We encourage directors to undergo training programs.

In 2023, all directors attended a seminar presented by Dr. Ram Charan, a distinguished business advisor, during the GMC Meeting. The session focused on key trends shaping the future of business and provided valuable insights and feedback for strategic decision-making.

The details of all courses attended are in the Directors profiles.

The SET requires the person taking the highest responsibility in finance and accounting (Chief Financial Officer or CFO) and the person supervising accounting (Chief Accountant) to undertake certain training to meet the qualifications specified by the SEC. Indorama Ventures' CFO and Head of Accounting completed the following training in 2023:

Chief Financial Officer (CFO) Mr. Dilip Kumar Agarwal	Head of Account Mr. Manoj Kumar Sharma
Cost Accounting for Decision Making by Accounting Coach (Thailand) Co., Ltd. (7.30 hours)	Inventories with interesting accounting issues by Accounting Coach (Thailand) Co., Ltd. (9 hours)

The Board also encourages senior management to attend training courses on corporate governance to enhance good governance within the Company.

9.2 Sub-Committees

The Indorama Ventures Board has appointed the following three sub-committees: (a) Audit Committee; (b) NCCG Committee; and (c) Sustainability and Risk Management Committee.

9.2.1 Audit Committee

The Audit Committee consists of three members. Mr. Rathian Srimongkol as Chairman, Mr. Tevin Vongvanich and Mrs. Kaisri Nuengsigkapian as members. Mrs. Kaisri was appointed in place of Dr. Siri Ganjarerndee, who retired in April 2023. All members are Independent Directors and have the requisite experience and knowledge to review financial statements. The term of the Audit Committee expires in September 2026.

The role and responsibility of the Audit Committee are specified in the Audit Committee Charter, Further details can be found in "Appendix 6" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

The Chairman of the Audit Committee reports on the Committee's activities to the Board immediately following its meetings. Between meetings, the Committee reviews emerging issues with the management team, Chief of Internal Audit and with the statutory auditors.

The Audit Committee Report on its performance to shareholders is separately disclosed in the 56-1 One Report.

Internal Audit

The Company has its own Internal Audit Department, Internal Audit Manual, and Internal Audit Charter. The Head of the Internal Audit Department is Mr. Narayanaswamy Subramanian. The Internal Audit Department conducts group wide internal audit activities under the supervision of the Head of Internal Audit. The Internal Audit Department reports functionally to the Audit Committee. A detailed annual plan is made for units and approved by the Audit Committee, which then periodically reviews the work of the Internal Audit Department compared to the plan and makes recommendations to management. In 2023, audits were conducted for all Thai units and several overseas units. The Audit Committee Secretary follows up on the implementation of recommendations and progress reports to the Audit Committee and undertakes periodic checks to ensure compliance with statutory and regulatory requirements.

9.2.2 Nomination, Compensation and Corporate Governance Committee

The NCCG Committee consists of three members. Mr. Russell Leighton Kekuewa is Chairman. Other members of the Committee are Mrs. Kaisri Nuengsigkapian and Dr. Harald Link. All members on the Committee are independent directors. The current term of the committee expires in May 2024.

Mr. Aloke Lohia, Group CEO, is an advisor to the NCCG Committee.

The role and responsibility of the NCCG Committee is specified in the NCCG Committee Charter, Further details can be found in "Appendix 6" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

A report from the NCCG Committee is separately disclosed in the 56-1 One Report.

9.2.3 Sustainability and Risk Management Committee

The SRMC Committee is chaired by Mr. Aloke Lohia, the Group CEO and Vice Chairman of the Board. Other members of the Committee are Mr. Rathian Srimongkol, Mr. Dilip Kumar Agarwal, Mr. Russell Leighton Kekuewa, Mr. Tevin Vongvanich, Mr. Yashovardhan Lohia and Mr. Sanjay Ahuja. As Mr. Udey Paul Singh Gill and Mr. Kanit Si retired in April 2023, Mr. Sanjay was appointed as a new member of the committee with effect from May 2023. The current term of the SRMC Committee expires in August 2026.

The role and responsibility of the SRMC Committee is specified in the SRMC Charter. Further details can be found in "Appendix 6" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

A report from the SRMC Committee is separately disclosed in the 56-1 One Report.

9.3 Selection and Appointment of Directors and Group CEO

9.3.1 Directors

The selection, appointment and the withdrawal of the Board of Directors of Indorama Ventures PCL shall be as prescribed by the Articles of Association, which can be summarized as follows:

1. To conduct the business of the Company, the Board of Directors shall consist of at least five directors. Not less than one-half of all directors shall have residence in the Kingdom of Thailand.
2. The appointment of a director shall be made by a majority vote of the shareholders meeting in accordance with the following conditions and procedures:
   (a) A shareholder shall have one vote for each share.
   (b) The shareholders shall vote for the election of each director in turn, one by one.
   (c) Each shareholder may exercise all the votes he or she has (a) to elect one or several people as a director or directors. But the shareholder cannot divide his or her votes to any nominated director by any an allotment of shares of any number.
   (d) The people receiving the most votes are those who are elected to be directors, in descending order, to the number of directors who are to be elected. If there is a tie in the last to be elected and this exceeds the said number of directors, the presiding chairman shall have the casting vote.
3. At every annual general meeting, one-third of the total number of Directors shall vacate their office. If the number is not a multiple of three, then the number nearest to one-third must retire from office. The directors to retire during the first and second years following the registration of the Company shall be drawn by lots. In subsequent years, the director who has been in office for the longest term shall retire. A retiring director is eligible for re-election.
4. Any director wishing to resign from the director's position shall submit a resignation letter to the Company. The resignation shall take effect upon the date on which the resignation letter reaches the Company.
5. The Shareholders' Meeting may pass a resolution removing any director prior to retirement by rotation, by a vote of not less than three-fourths of the number of shareholders attending the meeting and having the right to vote, and the shares held by them shall not, in aggregate, be less than one half the number of the shares held by the shareholders attending the meeting and having the right to vote.

Qualification of Directors and Independent Directors

The Company follows the guidelines of the SET and the SEC and industry best practices to set the qualifications of its Executive, Non-Executive, and Independent Directors. The qualifications of such Directors are specified in the Board of Directors Charter. Further details of the qualification of Directors and Independent Directors can be found in "Appendix 6" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

9.3.2 Lead Independent Director

In continuation of good governance practices, the Board, at its meeting in February 2018, approved the appointment of a Lead Independent Director. Mr. Rathian Srimongkol is the current Lead Independent Director, Chairman of Audit Committee and Member of the Sustainability and Risk Management Committee.

Further details of Roles and Responsibilities of Lead Independent Director can be found in "Appendix 7" posted on the Company's website (www.indoramaventures.com) using the QR Code below.

9.3.3 Group CEO

The Board of Directors will appoint the Group CEO. The Group CEO is a person with the highest personal and professional integrity, with demonstrated and exceptional ability and judgment and who will be most effective in serving the long-term interests of the Company with expert knowledge in the industry in which Indorama Ventures operates. Further details of role and responsibilities of the Group CEO can be found in "Appendix 7" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

9.4 Governance in Subsidiaries and Associated Companies

It is the policy of the Company to have at least one experienced representative from Thailand to be a director of its operating subsidiaries and associated companies. That person must have the requisite qualifications suitable for the business, with no conflict of interest with the businesses of those subsidiaries. The representative shall manage and administer the businesses according to the regulations and procedures provided in the Company's and subsidiaries' Articles of Association and relevant laws. All policies, procedures, guidelines, and recommendations of the Company must be implemented.

The Company Secretary Department keeps a summary of the corporate by-laws of all Indorama Ventures subsidiaries and regularly monitors their compliance with those laws.

Moreover, key information about each subsidiary and associate company is maintained and updated by the Company Secretary Department.

Every quarter, confirmation and updates are taken from all units on their compliance with regulations and litigations, if any. A summary is presented to the Audit Committee.

The Company Secretary Department in Thailand has a dedicated senior staff member to follow-up on all Indorama Ventures subsidiary companies' quarterly Board and shareholders' meetings as applicable. In this regard, they are monitored by a global meeting control statement.

The core subsidiary companies of Indorama Ventures held 597 Board and shareholders' meetings in 2023 which are summarized below:

Region	No. of Companies	No. of Meetings
Asia	55	273
Europe	65	204
Americas	71	89
Africa and the Middle East	7	29
Australia	2	2

Apart from these meetings, there were also regular management and executive committee meetings of respective businesses to review the business performance of the various subsidiaries.

Effective monitoring of the minutes at the various units is done by way of a "Meeting Control Statement" by the Corporate Secretarial team.

9.5 Use of the Company's Internal Information

The Company has a written policy on the use of confidential and/or internal information to prevent any illegal use. The statement is displayed at Indorama Ventures' head office and at the offices and workplaces of all our subsidiaries.

The Code of Conduct in the Manual prohibits directors and employees from buying, selling, transferring, or accepting the transfer of Company securities by using confidential and/or internal information in any manner that may take advantage of outsiders by using inside information.

All directors, senior management, auditors, and employees having access to Company financial statements are required to make a declaration to the Company Secretary of their shareholding movement, including their spouse and minor children. A summary of the shareholding is presented to the Board on a quarterly basis.

Each year, the Company directors and executives submit a 'Declaration of Interest" form to the Company Secretary in a format approved by the Board, on their interest or a related person's interest in the Company or its subsidiaries. Apart from the "Declaration of Interest," all directors and executives have signed the Acknowledgement of the Corporate Governance Manual.
In 2023, there was no case regarding the misuse of the Company's internal information.

Further details of Use of the Company's Internal Information can be found in "Appendix 8" posted on the Company's website (www.indoramaventures.com) using the QR Code below:

9.6 Audit Fee

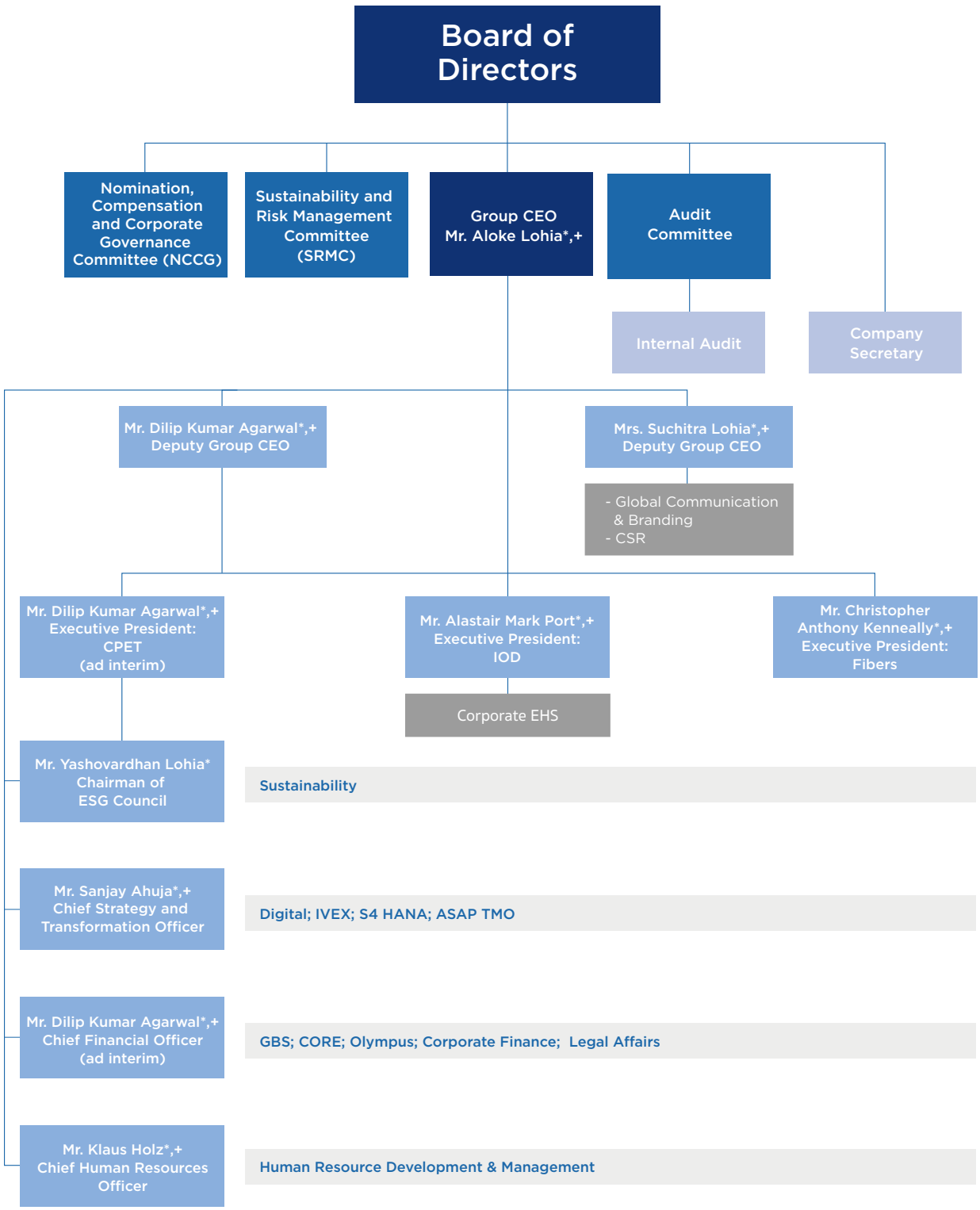
The total audit fee and non-audit fee paid during 2023 for Indorama Ventures and all its subsidiaries, jointly controlled entities and associates globally are as follows:

Particulars	Unit: Million Baht	
	2022	2023
1. The total audit fees for Indorama Ventures and all its subsidiaries, jointly controlled entities, and associates globally	242	249
a) Payment to KPMG Phoomchai Audit Ltd. and other member firms of KPMG Phoomchai Audit Ltd.	207	210
b) Other Audit firms	35	39
2. The total non-audit fees paid to member firms of KPMG International other than KPMG Phoomchai Audit Ltd.	97	165

Remark: The amount of non-audit fees relates to tax advice, due diligence in relation to the acquisitions, restructuring, and other advisory services.

Our Company's policies, integrity, ethics, and disclosures always seek to emulate the best practices in corporate governance.

Management Structure



* Management as per SEC/SET regulations + Indorama Management Council (IMC) Members

The Board of Directors

As of 31 December 2023, Directors of the Company are:

Mr. Sri Prakash Lohia

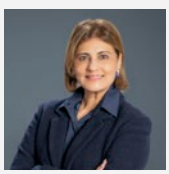
Position
- Chairman of the Board
- Non-Executive Director

Appointment Date of Directorship
- 19 September 2009

Mr. Aloke Lohia

Position
- Vice Chairman of the Board
- Executive Director
- Chairman of the Sustainability and Risk Management Committee
- Group Chief Executive Officer

Appointment Date of Directorship
- 19 September 2009



Mrs. Suchitra Lohia

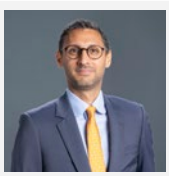
Position
- Executive Director
- Deputy Group CEO
- Chairperson of the Corporate Social Responsibility Committee

Appointment Date of Directorship
- 19 September 2009

Mr. Amit Lohia

Position
- Non-Executive Director

Appointment Date of Directorship
- 19 September 2009



Mr. Yashovardhan Lohia

Position
- Executive Director
- Member of the Sustainability and Risk Management Committee
- Chairman of ESG Council

Appointment Date of Directorship
- 24 April 2019

Mr. Dilip Kumar Agarwal

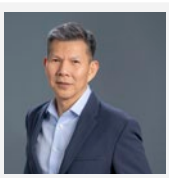
Position
- Executive Director
- Member of the Sustainability and Risk Management Committee
- Deputy Group CEO
- Executive President : Combined PET (Ad Interim)
- Chief Financial Officer (Ad Interim)

Appointment Date of Directorship
- 27 April 2010

Mr. Sanjay Ahuja

Position
- Executive Director
- Chief Strategy and Transformation Officer

Appointment Date of Directorship
- 13 November 2015



Mr. Rathian Srimongkol

Position
- Vice Chairman of the Board
- Lead Independent Director
- Chairman of the Audit Committee
- Member of the Sustainability and Risk Management Committee

Appointment Date of Directorship
- 19 September 2009

Mr. Russell Leighton Kekuewa

Position
- Independent Director
- Chairman of the Nomination, Compensation, and Corporate Governance Committee
- Member of the Sustainability and Risk Management Committee

Appointment Date of Directorship
- 20 October 2014

Mr. Tevin Vongvanich

Position
- Independent Director
- Member of the Audit Committee
- Member of the Sustainability and Risk Management Committee

Appointment Date of Directorship
- 24 April 2019

Mrs. Kaisri Nuengsigkapian

Position
- Independent Director
- Member of Audit Committee
- Member of the Nomination, Compensation, and Corporate Governance Committee

Appointment Date of Directorship
- 30 June 2020

Dr. Harald Link

Position
- Independent Director
- Member of the Nomination, Compensation, and Corporate Governance Committee

Appointment Date of Directorship
- 1 November 2021

Further details can be found in "Appendix 1," posted on the Company's website (www.indoramaventures.com). Use the QR Code below to access:

The Authorized Directors

The Authorized Directors who sign on behalf of the Company can be any two of the following directors: Mr. Aloke Lohia, Mrs. Suchitra Lohia, Mr. Dilip Kumar Agarwal, Mr. Sanjay Ahuja, and Mr. Yashovardhan Lohia, together with the Company's affixed seal.

Composition of the Board of Directors

There are five executive directors, (1) Mr. Aloke Lohia, (2) Mrs. Suchitra Lohia, (3) Mr. Dilip Kumar Agarwal, (4) Mr. Sanjay Ahuja, and (5) Mr. Yashovardhan Lohia.

There are five independent directors, (1) Mr. Rathian Srimongkol, (2) Mr. Russell Leighton Kekuewa, (3) Mr. Tevin Vongvanich, (4) Mrs. Kaisri Nuengsigkapian, and (5) Dr. Harald Link, in addition to two non-executive directors, (1) Mr. Sri Prakash Lohia and (2) Mr. Amit Lohia.

Roles, duties and responsibilities of the Board

Further details can be found in "Appendix 7," posted on the Company's website (www.indoramaventures.com). Use the QR Code below to access:

Sub-committees

Indorama Ventures Public Company Limited comprises three sub-committees: the Audit Committee, the Nomination, Compensation, and Corporate Governance Committee, and the Sustainability and Risk Management Committee. Detailed information about each sub-committee is available in the "Corporate Governance Report" section.

Executives (as per SEC's regulation)

As of 31 December 2023, the Company's executives are:

Name	Position
1. Mr. Aloke Lohia*	Group Chief Executive Officer
2. Mrs. Suchitra Lohia*	Deputy Group CEO and Chairperson of the Corporate Social Responsibility Committee
3. Mr. Yashovardhan Lohia	Chairman of ESG Council
4. Mr. Dilip Kumar Agarwal*	Deputy Group CEO, Executive President: Combined PET (Ad Interim), and Chief Financial Officer (Ad Interim)
5. Mr. Sanjay Ahuja*	Chief Strategy and Transformation Officer
6. Mr. Alastair Mark Port*	Executive President: Integrated Oxides and Derivatives
7. Mr. Christopher Anthony Kenneally*	Executive President: Fibers
8. Mr. Klaus Holz*	Chief Human Resources Officer
9. Mr. Manoj Kumar Sharma	Head of Account

* Members of Indorama Management Council (IMC)

The Company Secretary

The Board of Directors of the Company has appointed Mr. Souvik Roy Chowdhury as the Company Secretary effective 15 February 2010. Further details can be found in "Appendix 1, 3, and 7," posted on the Company's website (www.indoramaventures.com). Use the QR Code below to access:

Remuneration of Directors and management

Please see the details under "Corporate Governance Report."

Personnel

Number of employees

As of 31 December 2023, the Company, including its affiliates and in accordance with its business structure, has a total of 29,056 employees as outlined below:

Type of Businesses	Number of Employees
Combined PET	9,054
Fibers (including Wool)	16,170
Integrated Oxides and Derivatives	3,003
Corporate Supports	829

Employee benefits paid out in 2023

Items	Amount (in Million Baht)
Wages, Salaries, Bonuses, and Staff Welfare	43,528
Provident Funds	44
Long-term Employee Benefits	3,957
Other Long-term Benefits (EJIP)	-

People

Key achievements for 2023

86.43%
Global Retention Rate
13.57% Global Attrition Rate
6.60% Voluntary Attrition Rate

92
Nationalities

24.26%
Female

31.88
Average Training Hours

2023 Employee Engagement Survey results

- Survey participation: 84.06%
- Engagement score (Employee Net Promoter Score): 75.85%

1. Our global workforce is making a difference

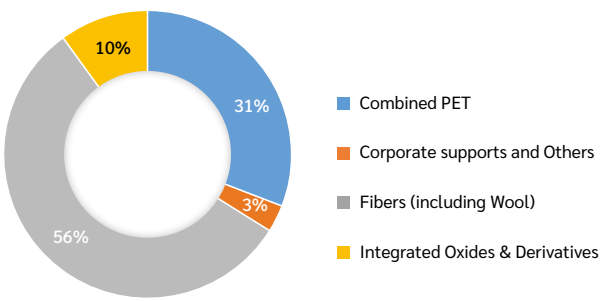
At Indorama Ventures, we value our people and continuously reinforce our team's capabilities to drive and strengthen our organization to be future ready.

In 2023, our management teams and leadership assessed the changed ecosystem to understand the cyclical trends of the world's economic situation and identify structural transformations that we need to implement to ensure our businesses can compete. Segment empowerment and reorganization efforts have been pivotal, emphasizing the importance of enabling segment leadership to take ownership, be agile, and apply innovative thinking.

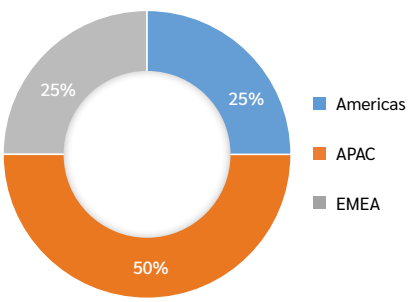
Compared to last year, the headcount of employees has been reduced to 29,056* as we did not replace all resigned. However, the number of Permanent employees increased by 1.37% to 26,093.

*Including permanent and temporary employees

Employees by segment



Employees by continent



We have continued to develop retention programs, which we have implement in units with the highest turnover rate over the past three years. Companywide, we also provide the Indorama Ventures Group Employee Assistance Program (EAP) to support employees in their moments of need, whether related to professional or personal circumstances.

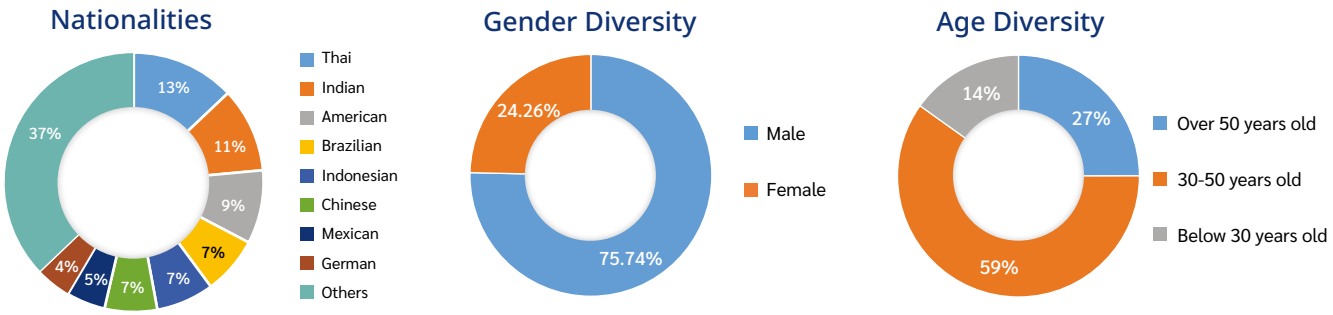
A local assessment was conducted through our Global Employee Engagement Survey, geographic data and exit interview analyses, focus groups, and input from our senior leadership team. Action plans were developed based on shared best practices to retain qualified employees within those units.

2. Diversity is our strength

Indorama Ventures values diversity and we take pride in connecting different cultures, backgrounds, and experiences.

In 2023, our focus was on establishing our talent pipeline for next-generation leadership. Developing the next generation of leadership is now a central theme, and the HR team has been tasked to develop our future leaders from various businesses, functions, and countries.

We strongly believe diversity allows our team to contribute exciting ideas and unique perspectives for sustainable growth.



3. Engaged people

The Global Employee Engagement (GEE) survey is conducted every two years. Survey results for 2023:

- Survey participation: 84.06%
- Employee engagement: 73.31% (actively engaged employees)
- Employee Net Promoter Score: 75.85%
- Key engagement drivers:
  1. Objectives and aspirations: 74.14%
  2. Accountabilities and collaboration: 78.71%
  3. People manager capabilities and interactions: 73.12%
  4. Performance management and recognition: 62.25%
  5. Leadership: 72.58%

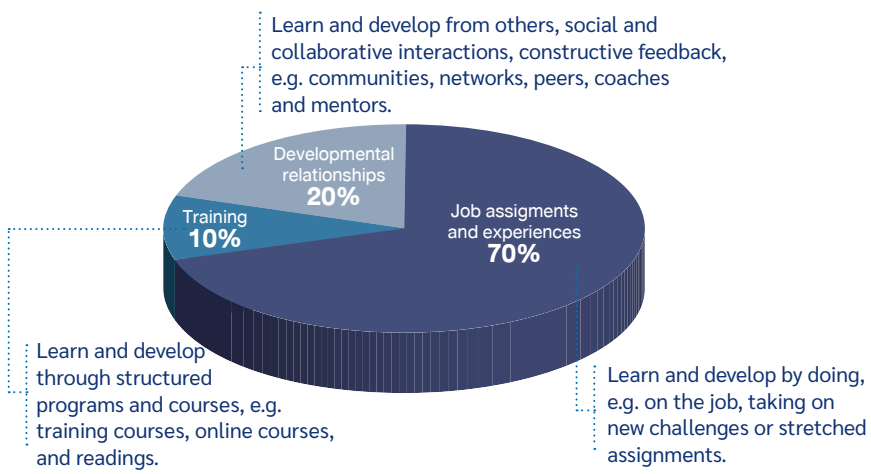
Following the survey, every site works on identifying improvement areas and actions through focus groups, validation, and leading and lagging data.

4. People development opportunities

We promote a learning culture and growth mindset:

- Employees take ownership and drive their development
- Managers facilitate, encourage, and support the development of their employees
- Through our leaders, we collectively create a dynamic, experiential, and innovative environment for growth and learning

We adopt a holistic learning and development approach, guided by a 70-20-10 ratio to support different ways to learn and grow, depending on development needs and individual learning styles.



Nurturing Indorama Ventures' next generation of leaders

In 2023, we launched Indorama Ventures' inaugural Future Leaders Program, targeted at young leaders globally to facilitate and accelerate their development for future leadership roles. It offers a comprehensive 12-month development journey, comprising a blended learning approach including contextualized assessments, tailored learning modules, coaching, mentoring, experience-based assignments, and individual-specific development actions.

Highlights for 2023

Sr.	Initiatives	Outcomes
1	**Indorama Ventures Leadership Development**	
	1. A strategic priority, as quality leadership enables sustained business performance and high employee engagement 2. Focuses on accelerating the development of young leaders	• 2,037 leaders were trained through leadership training programs • 2,211 leaders completed leadership e-learning • New 12-month Future Leaders Program launched with 49 participants
2	**Functional Training**	
	1. Sustainability: To embed a sustainability culture and mindset in Indorama Ventures through a centralized learning platform	• 50% of the 2023 Global Management Conference (GMC) leaders completed at least two out of the five Sustainability Academy courses • A total of 146.5 learning hours completed
	2. The Digital Academy empowers employees with essential digital awareness, fostering a foundation in digital concepts. The academy explores the benefits of innovative technologies, aiding in employees' adoption and integration.	• 341 employees were enrolled in Digital Academy training programs • A total of 504 learning hours completed
	3. The IVEX Executive Belt training and Champion workshop covered the concept of continuous improvement, as well as the Lean Six Sigma program.	• A total of 67 leaders attended, including department heads and executives
	IVEX Green Belt trainings included both classic Lean Six Sigma training for manufacturing employees, and tailored courses for employees in non-manufacturing areas.	• 297 middle-level managers (and above) completed IVEX Green Belt training • Accumulation of over 1,900 trained IVEX Lean Six Sigma Upper Belts

Training hours by category:

Category	Training hours
Leadership curriculum	48,640
Mandatory programs	498,503
Functional/technical trainings	284,712
Total	**831,855**

5. Succession planning

The global succession planning process was launched in 2019 to build a robust talent pipeline, with two successors ready in two years.

Encompassing 39 senior management positions and 68 validated successors in 2019, the process was expanded to include middle and site management positions. In 2023, we managed 1,154 positions with 1,828 validated successors, with strong progress made on diversity and age profile. With succession planning well institutionalized, we will continue to further develop and deploy our Talent Capital initiatives.

In consultation with the NCCG committee, the Board reviews both the process adequacy and the plan for the Group CEO and Executive Board positions. For other key positions, we ensure successful leadership transitions through constant development of the next generation of leaders.

6. Compensation and rewards

Our compensation packages are assessed against industry standards and local nuances, either matching or exceeding them. The incentive system is linked to a combination of the performance matrix of the company, business unit, and individual levels. In 2023, we continued job evaluations for middle management positions in addition to site leadership positions, which were done in 2022. We continued to encourage sites to utilize SAP SuccessFactors as tool for the salary review process with market benchmarking across all plants in the Indorama Ventures Group.

For the rewards system, we have the **Indorama Ventures Performance Excellence Award**, a significant initiative to sustain and improve employee engagement and to inspire our employees to challenge all boundaries to produce outstanding results. This award is based on stellar performance

across the criteria: Financial Performance, Operational Performance, and Sustainability Performance. The best business units are identified by benchmarking their performance against these criteria, while cash incentives are also provided to employees of these units to recognize their excellent teamwork.

In addition, we also have the **Indorama Ventures Culture Awards**, an important initiative to build a shared understanding of the behavior associated with our culture and values, which are the foundation of our success. This award is granted to employees and teams that exemplify our core principles and focuses on five categories: Change Enabler, Leadership, Responsible, Customer Centric and Driving Diversity.

GCEO remuneration to average employee remuneration ratio:

	Remuneration 2023
GCEO (in THB 000)	125,908.25
Average Employee Remuneration (in THB 000)	1,816.69
Ratio	69.62

7. Human rights

Indorama Ventures respects the human rights of all its workers and the local communities in which we operate. In 2017, we formalized our commitment to the UN Guiding Principles on Business and Human Rights. We started a yearly global survey in 2015 on human rights, continue to work on action plans to mitigate perceived risks, and also engage with our suppliers on their commitment to address human rights issues. Our respective units have taken the initiative in getting SA8000 certification, or its equivalent, to ensure that there are no human rights violations across the organization.

8. Material labor disputes

Since our inception, Indorama Ventures has never had any material labor disputes.

Connected Transaction

The connected transactions occur in the normal course of business and the pricing is akin to market prices or at arm's length basis that would normally be charged to/by any other customers/suppliers with comparable and reasonable terms and conditions. The following is a summary of such transactions as at 31st December 2023:-

Connected Party & Relationship	Type of Transaction	Amount (in MB)		
		2021	2022	2023
PT. Indo-Rama Synthetics Tbk., Indonesia (PTIRS) • The majority shareholding in PTIRS is ultimately controlled by a Trust in which Mr. Sri Prakash Lohia[1] and his immediate family members are the discretionary beneficiaries. • Mr. Sri Prakash Lohia[1] is the President Commissioner and Mr. Amit Lohia[1] is a Vice President Commissioner of PTIRS.	Sale of raw materials/ products/ services/ utilities	3,718.1	3,542.72	3,022.15
	Purchase of raw materials/ products/ services/ utilities	617.57	644.11	269.62
Indorama Eleme Petrochemicals Ltd., Nigeria (IEPL) • The majority shareholding in IEPL is ultimately controlled by a Trust in which Mr. Sri Prakash Lohia[1] and his immediate family members are the discretionary beneficiaries. • Mr. Sri Prakash Lohia[1] is the Chairman and Mr. Amit Lohia[1] is a Director of IEPL	Purchase of utilities/ services	133.48	83.00	45.75
Pacific Resources Ltd., Thailand Mr. Anuj Lohia, son of Mr. Aloke Lohia[2], is a major shareholder of Pacific Resources Ltd.	Service expense (Office Lease)	7.61	7.61	8.44
Cryoviva (Thailand) Ltd., Thailand Mr. Aloke Lohia[2] is an indirect shareholder of Cryoviva (Thailand) Ltd.	Service income	0.93	0.93	0.93
PT. Irama Unggul, Indonesia (IU) • The majority shareholding in IU is ultimately controlled by a Trust in which Mr. Sri Prakash Lohia[1] and his immediate family members are the discretionary beneficiaries. • Mr S P Lohia[1] is the President Commissioner of Irama Unggul.	Service expense (Office Lease)	1.05	1.12	1.06
Lohia Global Holdings Limited, Hong Kong-China Lohia Global Holdings Limited is owned by Ms. Shruti Lohia, a daughter of Mr. Sri Prakash Lohia[1], and Mr. Krishan Kumar Aggarwal.	Service expense (Royalty Fee for Indorama trade name)	228.42	268.82	253.88

Connected Party & Relationship	Type of Transaction	Amount (in MB)		
		2021	2022	2023
Vega Aviation Limited, British Virgin Islands Vega Aviation Limited is a company which is 100% owned by Canopus International Limited, Mauritius. Canopus International Limited is a company in which Mr. Aloke Lohia[2] and his immediate family have voting rights of up to 76% and an equity interest of up to 50% while the remaining voting rights of 24% and 50% of the equity interest is ultimately controlled by a Trust in which Mr. Sri Prakash Lohia[1] and his immediate family members are the discretionary beneficiaries.	Service expense (Aircraft Lease)	83.53	72.97	72.43
Thai Plaspac Public Company Limited, Thailand (TPAC) • Mr. Anuj Lohia, son of Mr. Aloke Lohia[2], is a major shareholder in TPAC. • Mr. Kevin Kumar Sharma, son-in-law of Mr. Aloke Lohia[2], is the CEO of TPAC	Sale of products	42.03	60.49	56.43
Yayasan Pendidikan Indorama, Indonesia (YP) The sole trustee of YP is Mr. Sri Prakash Lohia[1] and Mr. Amit Lohia[1] is the Chairman of the Advisory Board of YP.	Service Expense (Job work)	7.93	8.46	8.22
PT. Tigadaya Minergy, Indonesia The majority shareholding of PT. Tigadaya Minergy is ultimately controlled by Mr. Sri Prakash Lohia[1].	Purchase of coal	0.00	0.00	47.01
Indorama Industries Limited, India (IIL) The majority shareholding in IIL is ultimately controlled by a Trust in which Mr. Sri Prakash Lohia[1] and his immediate family members are the discretionary beneficiaries.	Sale of raw materials/ products/ services/ utilities Purchase of raw materials/ products/ services/ utilities	0.87 58.89	0.00 43.10	0.00 10.01
Indorama Synthetics (India) Limited (IRSL) Mr. O.P. Lohia, a major shareholder of Indorama Synthetics India Ltd. is brother of Mr. Aloke Lohia[2].	Sale of raw materials, yarn Purchase of yarn	428.30 -	3,672.76 -	3,074.3 32.19
IVL Foundation Mrs. Suchitra Lohia[3] and Mrs. Aradhana Lohia, a daughter of Mr. Aloke Lohia[2] and Mrs. Suchitra Lohia[3], are the Chairperson and Vice Chairperson of the IVL Foundation.	Donation for various social, charitable, environmental protection, sports, healthcare and other related activities.	23.00	13.50	15.00
Sun Packaging Systems (FZC) Sun Packaging Systems (FZC) is subsidiary of Thai Plaspac Public Company Limited (TPAC). Mr. Anuj Lohia, son of Mr. Aloke Lohia[2], is a major shareholder in TPAC. Mr. Kevin Sharma, son in law of Mr. Aloke Lohia[2], is the CEO of TPAC.	Sale of products	0.00	23.40	0.00

Connected Party & Relationship	Type of Transaction	Amount (in MB)		
		2021	2022	2023
Indorama India Private Limited (IIPL) • The majority shareholding in IIPL is ultimately controlled by a Trust in which Mr. Sri Prakash Lohia[1] and his immediate family members are the discretionary beneficiaries. • Mr. Sri Prakash Lohia[1] is the Chairman and Mr Amit Lohia[1] is a Vice Chairman of IIPL.	Sale of products	0.00	0.93	0.31
Aurus Speciality Limited (Aurus) The major shareholder of the Aurus Speciality Limited is Beacon Chemicals Limited and whose ultimate beneficiaries are Mr. Aloke Lohia[2], the Group CEO of the Company, and Mrs. Suchitra Lohia[3], the Deputy Group CEO of the Company, holding approximately 99.71%.	Sale of Land, Buildings and Plant & Machinery	0.00	106.08	0.00
Indorama Holdings Brasil Ltda (IHBL) IHBL is a subsidiary of Indorama Corporation. Mr. Sri Prakash Lohia[1] is the Chairman of Indorama Corporation.	Sale of Etildiglicol (Integrated EG)	0.00	0.00	9.95

Remark: [1] Mr. Sri Prakash Lohia is the Chairman and a Non-Executive Director and Mr. Amit Lohia is a Non-Executive Director of Indorama Ventures Public Company Limited ("IVL");
[2] Mr. Aloke Lohia is an Executive Director and Group CEO of IVL;
[3] Mrs. Suchitra Lohia is an Executive Director and Deputy Group CEO of IVL.

The Audit Committee Opinion on the Connected Transaction

The above connected transactions have been considered and opined by the Company's Audit Committee that the aforesaid connected transactions are reasonable and undertaken in the interest of the Company's business. While entering into these transactions, the Committee considers the best interest of the Company. No additional benefit has been transferred between the Company and the persons who have the conflict of interest.

Policy and Procedure to Approve the Connected Transaction

In the event that the Company carries out its business with the connected persons who may have a conflict of interest with the Company, the Audit Committee will express its opinion regarding the necessity of such transactions. The Audit Committee will ensure that terms and conditions of these transactions are consistent with market practice and prices charged for these transactions are evaluated and compared with market prices. In the event that market price is not available, the Audit Committee must ensure that these prices are reasonable and the transactions are carried out in the best interest of the Company. If the Audit Committee is unable to evaluate connected transactions due to lack of expertise in certain areas, the Company will arrange an independent expert to evaluate and give opinion on such transactions. The Board of Directors or the Audit Committee or the Company shareholders, as the case may be, will use this opinion from the independent expert as a supplement to form their own conclusion. Those directors who may have conflict of interest with the Company are prohibited from either voting or attending the meeting on matters regarding to the said connected transactions and disclose in Annual Registration Statement/ Annual Report (Form 56-1 One Report).

Policy on the Entering into a New Connected Transaction

For any new connected transaction, the respective unit would need to contact the Secretary of the Audit Committee and inform about the proposed transaction, its rationale, value of transaction, pricing, terms and conditions in order for the Secretary of the Audit Committee to classify under which category of connected transaction it would fall into and to get necessary approval from the Management/Audit Committee/ Board/Shareholders as required. Moreover, the Company will ensure that such transactions are carried out in compliance with the SEC Act, Rules, Notifications and Regulations of the Capital Market Supervisory Board, SEC and SET. In addition, the Company must also comply with the disclosure rules related to connected transactions and the Company's policy.

Internal Control and Risk Management

The Board of Directors has assigned the Audit Committee (AC) to review the financial reporting process of Indorama Ventures and its subsidiaries. Along with it, the AC reviews the Company's performance in compliance with Corporate Governance principles, maintaining suitable, effective, and adequate internal controls and audit systems, and selects and recommends an external auditor, and any other tasks as assigned by the Board.

The Company's in-house Internal Audit Department (IAD) reports to the AC. The IAD, through its assurance reviews, assesses the adequacy and effectiveness of internal control systems for the Company and its subsidiaries. The department reports its findings and recommendations to management and the AC. The adequacy and effective working of the system of internal controls are documented in the Indorama Ventures Sufficiency of Internal Control System Evaluation Form.

The Board of Directors, at Meeting No. 2/2024 held on 23 February 2024 and attended by all members of the AC, considered the recommendations of the Committee, evaluated its opinion on the internal control systems of the Company and its subsidiaries for 2023, and observed the internal control systems to be adequate and effective. The internal control systems in use at the Company generally conform to the internal control model as advocated by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The summary of Indorama Ventures' internal control systems is in line with the COSO framework as detailed below:

Control environment

Indorama Ventures prepares annual and five-year business plans, which are approved by the Board of Directors. These plans form the basis of setting employee performance goals at all the operating entities, which are periodically reviewed. All employees have been provided with the Indorama Ventures Policy Handbook containing the policies that facilitate an improved control environment. Indorama Ventures has a detailed Code of Conduct for its Directors and Employees which also applies to its subsidiaries and affiliates. All new employees sign off on the Code of Conduct as part of their orientation program. The Code of Conduct for Directors and Employees is also published on Indorama Ventures' website.

The Company has a Policy on Internal Information Control and Use of Insider Information to regulate the conduct of all directors, executives, and employees to keep the Company's information confidential and to not divulge it with the aim of gaining benefits for the individual in question or others, directly or indirectly. The Anti-Corruption Policy was adopted to conduct Indorama Ventures' business globally with honesty, fairness, without corruption or bribery, and with accountability. These policies are published on Indorama Ventures' website.

Risk assessment

Indorama Ventures has a Sustainability and Risk Management Committee (SRMC) that reviews the Company's performance on sustainability, assesses the risks associated with aspects of sustainable development, and informs the Board of risks with potentially significant impacts that could adversely impact sustainable and profitable growth. The SRMC reports to the Board periodically on its activities and evaluates its performance on an annual basis. The SRMC also reviews the sensitivity analysis of the business plan, and greenfield and M&A projects. The respective business heads, who are members of the SRMC, also closely monitor key business risks.

Supporting the SRMC is the Risk Management Council (RMC). The primary role of the council is to serve as the central platform to assist the IMC, SRMC, and Board in identifying and deliberating about key emerging risks, including high-investment-value risk assessments, reviewing governing documents at the Group level, providing assurance on enterprise risk, and implementing crisis and business continuity management group-wide to protect, safeguard, and drive Indorama Ventures' interests.

Control activities

Indorama Ventures' operating entities have requisite policies and procedures with regard to its business activities. These, together with the Delegation of Authority Manual, ensure that adequate controls and checks are exercised, and risk of fraud or misappropriations is adequately mitigated. There is an adequate segregation of duties with respect to the authorizations, recording, and custody of assets. There is an internal policy on connected transactions which stipulates what constitutes a connected transaction, who falls under the definition of a connected party, and the procedure to be followed in case the Company enters into a connected transaction. All connected transactions have to follow the rules and regulations of the SET. A new connected transaction is reviewed by the AC and recommended to the Board for its approval. Every quarter, a statement of all connected transactions is submitted to the AC and the Board. All Indorama Ventures subsidiaries have directors who regularly monitor their operations, ensuring they are in line with Indorama Ventures' overall objectives. The Indorama Ventures Board is regularly briefed on the performance of its subsidiaries. Confirmation is obtained from the respective Plant Head, validating the compliance with the applicable laws and regulations, while statutory filings are reported to the AC on a quarterly basis and to the Board on an as-needed basis. The Company has a Disaster Recovery Plan for IT processes to bring the IT system back to normal within a specified timeframe in case any disaster happens.

Information and communications

The Company management ensures that requisite information is provided to the Board for their review and consideration. The minutes of the Board of Directors' meeting are prepared by the Company Secretary, reviewed by all Directors, and signed off by the Chairman of the Meeting. The Company Secretary and the AC Secretary fulfill any requirements and provide information as needed to assist the Directors. Indorama Ventures has a Whistle-blower Policy that provides different channels for employees to lodge complaints, if any, anonymously. The Company's Legal & Secretarial Department is authorized to communicate with regulatory agencies. Indorama Ventures' website provides a communications channel to external parties who may contact the Company's Independent Directors by sending an email to: independentdirectors@indorama.net or ethics@indorama.net

Monitoring

The annual operational and performance budgets of the Company and its subsidiaries are reviewed and approved by the Board of Directors. Indorama Ventures' quarterly-audited consolidated financial statements are reviewed and approved by the AC, which also reviews the annual-audited financial statements and makes recommendations to the Board for its approval.

The Company's in-house IAD formulates the annual internal audit plan. The audit plan considers several risk factors and results of previous internal audit business process reviews. The annual internal audit plan is also discussed with the Company's senior management before it is ultimately reviewed and approved by the AC. The IAD reviews the internal control system throughout the various business processes and across all Indorama Ventures subsidiaries, according to its annual audit plan. The deficiencies noted and recommendations made are communicated through their internal audit report. The significant audit findings are presented to the AC on a half-yearly basis. From time to time, the AC reviews a management letter from the external auditors, and periodically reviews the status update on the implementation of outstanding audit recommendations.

Head of Internal Audit and Head of Corporate Compliance

1. Head of Internal Audit

The IAD has an Internal Audit Manual, a document that governs the department's activities, describing in detail the IIA, International Professional Practices Framework, Standards, and activities undertaken for Internal Audit planning until its execution. The AC has the authority to approve the appointment, transfer, and dismissal of the Head of Internal Audit. Mr. Narayanaswamy Subramanian heads the Indorama Ventures IAD.

2. Head of Corporate Compliance

Indorama Ventures has appointed the Company Secretary, Mr. Souvik Roy Chowdhury, as the Head of Corporate Compliance to review and evaluate the various statutory and corporate compliances for all business entities and ensure they are in accordance with the applicable rules and regulations.

INDEPENDENT AUDITOR'S REPORT

To the Shareholders of Indorama Ventures Public Company Limited

Opinion

I have audited the consolidated and separate financial statements of Indorama Ventures Public Company Limited and its subsidiaries (the "Group") and of Indorama Ventures Public Company Limited (the "Company"), respectively, which comprise the consolidated and separate statements of financial position as at 31 December 2023, the consolidated and separate statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

In my opinion, the accompanying consolidated and separate financial statements present fairly, in all material respects, the financial position of the Group and the Company, respectively, as at 31 December 2023 and their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRSs).

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements* section of my report. I am independent of the Group and the Company in accordance with the *Code of Ethics for Professional Accountants including Independence Standards* issued by the Federation of Accounting Professions (Code of Ethics for Professional Accountants) that is relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code of Ethics for Professional Accountants. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key Audit Matters

Key audit matters are those matters that, in my professional judgment, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Impairment assessments of cash-generating units	
Refer to Note 12, 14, 17 and 18 to the consolidated financial statements.	
The key audit matter	**How the matter was addressed in the audit**
At 31 December 2023, the Group identified that the impairment indicators existed in some Cash Generating Units ("CGUs"). Therefore, the Group performed impairment assessments for these CGUs by applying the value-in-use (discounted cash flow ("DCF")) method to determine the recoverable amount of these CGUs. Due to the significant judgment and complexities involved in determining the future cash flows attributable to CGUs, I considered the measurement of the recoverable amount derived from the value in use as a key audit matter.	My audit procedures performed for impairment assessment at CGUs with impairment indications at reporting date included the following: • Assessed if the Group's identification of the CGUs were appropriate; • Evaluated the DCF provided by the Group and the Group's assumptions applied in the value-in-use method against relevant documents and projections as well as externally derived data; • Analyzed historical information, where available, to support the precision in the Group's forecasting process; • Tested the principles and mathematical accuracy of the DCF and performed sensitivity analysis around the key assumptions; • Evaluated the financial parameters applied to the discount rate; • Assessed the adequacy of the Group's disclosure in accordance with Thai Financial Reporting Standards.

Impairment assessments of goodwill	
Refer to Note 17 to the consolidated financial statements.	
The key audit matter	**How the matter was addressed in the audit**
As at 31 December 2023, the Group had goodwill of Baht 17,584 million. The Cash Generating Units ("CGUs") to which the goodwill belongs are tested for impairment annually. The Group applies the value-in-use (DCF) method to determine the recoverable amount of each CGU to which goodwill belongs. Any shortfall of the recoverable amounts against the carrying amounts would be recognized as impairment losses. Due to the materiality of the balances and the significant judgment and complexities involved in determining the future cash flows attributable to the individual CGU to which goodwill belongs, I considered the measurement of the recoverable amount as a key audit matter.	My audit procedures performed for impairment assessment of goodwill included the following: • Assessed if the Group's identification of the CGU to which goodwill belongs were appropriate; • Evaluated the DCF provided by the Group and the Group's assumptions applied in the value-in-use method against relevant documents as well as externally derived data; • Analyzed historical information to support the precision in the Group's forecasting process; • Tested the principles and mathematical accuracy of the DCF and performed sensitivity analysis around the key assumptions; • Evaluated the financial parameters applied to the discount rate; • Assessed the adequacy of the Group's disclosure in accordance with Thai Financial Reporting Standards.

Other Information

Management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance and request that the correction be made.

Responsibilities of Management and Those Charged with Governance for the Consolidated and Separate Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, management is responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's and the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements

My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

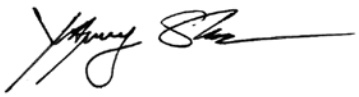
As part of an audit in accordance with TSAs, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.



(Yoottapong Soontalinka)
Certified Public Accountant
Registration No. 10604

KPMG Phoomchai Audit Ltd.
Bangkok
23 February 2024

STATEMENT OF FINANCIAL POSITION

Indorama Ventures Public Company Limited and its Subsidiaries

Assets	Note	Consolidated financial statements 31 December 2023	Consolidated financial statements 31 December 2022	Separate financial statements 31 December 2023	Separate financial statements 31 December 2022
			(in thousand Baht)		
Current assets					
Cash and cash equivalents	*6*	18,682,608	21,211,149	4,285	73,523
Current investments		1,074,280	533,189	-	-
Trade accounts receivable	*7*	51,113,530	55,580,273	-	-
Other receivables		1,284,279	2,707,953	1,082,484	719,028
Short-term loans to related parties and interest receivable from related parties	*5*	115,673	23,694	30,244,024	6,813,127
Inventories	*8*	96,656,579	115,872,264	-	-
Other current financial assets	*31*	1,034,048	1,312,646	28,407	43,504
Other current assets	*9*	19,393,173	18,466,669	236,130	157,408
Total current assets		**189,354,170**	**215,707,837**	**31,595,330**	**7,806,590**
Non-current assets					
Other non-current financial assets	*31*	1,956,594	6,685,487	-	-
Investments in subsidiaries	*10*	-	-	61,397,181	61,405,350
Investments in associate and joint ventures	*11*	3,798,817	3,729,053	-	-
Other long-term investments		295,015	335,996	-	-
Long-term loans to related parties	*5*	342,233	-	92,959,325	106,123,587
Property, plant and equipment	*14*	312,392,863	320,630,124	-	-
Right-of-use assets	*15*	14,982,291	12,393,396	-	-
Goodwill	*17*	17,583,767	17,888,189	-	-
Intangible assets other than goodwill	*18*	34,672,303	34,684,517	-	-
Deferred tax assets	*28*	6,853,610	4,540,503	332,254	-
Other non-current assets	*19*	7,900,304	7,283,289	183,386	1,034,089
Total non-current assets		**400,777,797**	**408,170,554**	**154,872,146**	**168,563,026**
Total assets		**590,131,967**	**623,878,391**	**186,467,476**	**176,369,616**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF FINANCIAL POSITION

Indorama Ventures Public Company Limited and its Subsidiaries

Liabilities and equity	Note	Consolidated financial statements 31 December 2023	Consolidated financial statements 31 December 2022	Separate financial statements 31 December 2023	Separate financial statements 31 December 2022
			(in thousand Baht)		
Current liabilities					
Bank overdrafts and short-term loans from financial institutions	*20*	28,419,243	31,247,825	-	-
Trade accounts payable		101,934,941	106,720,741	-	-
Current portion of long-term loans from financial institutions	*20*	22,977,568	28,501,962	-	2,536,088
Current portion of debentures	*20*	15,558,225	5,274,945	4,159,098	4,086,621
Current portion of lease liabilities	*20*	2,448,411	2,254,915	-	-
Corporate income tax payable		1,642,645	2,899,301	-	-
Other current financial liabilities	*31*	1,862,858	2,142,122	-	-
Other current liabilities	*21*	26,503,342	23,158,550	737,644	805,365
Total current liabilities		**201,347,233**	**202,200,361**	**4,896,742**	**7,428,074**
Non-current liabilities					
Long-term loans from financial institutions	*20*	103,310,052	102,464,129	-	-
Long-term loans from related parties	*5*	-	-	12,500,000	8,000,000
Lease liabilities	*20*	11,104,654	8,645,371	-	-
Debentures	*20*	70,513,857	75,924,183	65,093,862	59,268,662
Deferred tax liabilities	*28*	15,678,244	19,529,088	-	167,836
Non-current provisions for employee benefits	*22*	6,594,067	6,172,824	-	-
Other non-current financial liabilities	*31*	321,342	625,544	-	-
Other non-current liabilities	*4(ii)*	3,194,597	7,431,509	-	-
Total non-current liabilities		**210,716,813**	**220,792,648**	**77,593,862**	**67,436,498**
Total liabilities		**412,064,046**	**422,993,009**	**82,490,604**	**74,864,572**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF FINANCIAL POSITION

Indorama Ventures Public Company Limited and its Subsidiaries

Liabilities and equity	Note	Consolidated financial statements 31 December 2023	Consolidated financial statements 31 December 2022	Separate financial statements 31 December 2023	Separate financial statements 31 December 2022
			(in thousand Baht)		
Equity					
Share capital:					
Authorized share capital *(5,670,702 thousand ordinary shares, par value at Baht 1 per share)*		5,670,702	5,670,702	5,670,702	5,670,702
Issued and paid-up share capital *(5,614,552 thousand ordinary shares, par value at Baht 1 per share)*		5,614,552	5,614,552	5,614,552	5,614,552
Share premium:					
Share premium on ordinary shares		60,331,434	60,331,434	60,331,434	60,331,434
Hedging reserve		2,335,669	4,988,026	669,368	684,144
Translation reserve		(7,228,271)	(6,494,939)	-	-
Excess of cost over book value of acquired subsidiaries		(4,115,246)	(4,115,246)	-	-
Differences arising from common control transactions		(1,235,562)	(1,235,562)	-	-
Retained earnings					
Appropriated					
Legal reserve	*23*	10,041,251	9,112,061	567,070	567,070
Unappropriated		83,713,709	102,884,583	21,889,690	19,403,086
Subordinated perpetual debentures	*24*	14,904,758	14,904,758	14,904,758	14,904,758
Equity attributable to owners of the Company		**164,362,294**	**185,989,667**	**103,976,872**	**101,505,044**
Non-controlling interests	*13*	13,705,627	14,895,715	-	-
Total equity		**178,067,921**	**200,885,382**	**103,976,872**	**101,505,044**
Total liabilities and equity		**590,131,967**	**623,878,391**	**186,467,476**	**176,369,616**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF INCOME

Indorama Ventures Public Company Limited and its Subsidiaries

	Note	Consolidated financial statements Year ended 31 December 2023	2022	Separate financial statements Year ended 31 December 2023	2022
			(in thousand Baht)		
Income					
Revenue from sales of goods	*25*	541,458,048	656,266,448	-	-
Dividend income	*5*	-	-	7,963,195	10,934,704
Net foreign exchange gain		-	976,126	40,422	55,717
Other income	*26*	5,091,116	8,335,353	1,851,196	2,150,089
Total income		**546,549,164**	**665,577,927**	**9,854,813**	**13,140,510**
Expenses					
Cost of sales of goods		476,039,290	544,321,267	-	-
Distribution costs		28,439,017	36,701,735	-	-
Administrative expenses		29,729,961	25,714,269	1,615,815	2,026,909
Impairment loss of property, plant and equipment, goodwill and other intangible assets	*12, 14, 17, 18*	10,726,951	8,645,118	-	-
Impairment loss of an investment in subsidiary	*10*	-	-	-	5,182,189
Management benefit expenses	*5*	574,417	478,861	33,140	30,880
Net foreign exchange loss		466,535	-	-	-
Total expenses		**545,976,171**	**615,861,250**	**1,648,955**	**7,239,978**
Profit from operating activities		**572,993**	**49,716,677**	**8,205,858**	**5,900,532**
Finance income		1,182,622	946,764	3,910,283	3,863,071
Finance costs		(15,367,212)	(10,495,196)	(2,829,154)	(2,836,891)
Reversal of expected credit loss (expected credit loss), net	*7*	6,159	(41,594)	-	-
Share of net profit (loss) of associate and joint ventures accounted for using equity method	*11*	8,283	(22,761)	-	-
Profit (loss) before tax expense (income)		**(13,597,155)**	**40,103,890**	**9,286,987**	**6,926,712**
Tax expense (income)	*28*	(2,683,811)	5,773,693	(406,352)	84,839
Profit (loss) for the year		**(10,913,344)**	**34,330,197**	**9,693,339**	**6,841,873**
Profit (loss) attributable to:					
Owners of the Company		(10,797,942)	31,006,084	9,693,339	6,841,873
Non-controlling interests	*13*	(115,402)	3,324,113	-	-
		(10,913,344)	**34,330,197**	**9,693,339**	**6,841,873**
Earnings (loss) per share					
Basic and diluted earnings (loss) per share *(in Baht)*	*29*	**(2.06)**	**5.39**	**1.59**	**1.09**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF COMPREHENSIVE INCOME

Indorama Ventures Public Company Limited and its Subsidiaries

	Note	Consolidated financial statements Year ended 31 December 2023	2022	Separate financial statements Year ended 31 December 2023	2022
		(in thousand Baht)			
Profit (loss) for the year		**(10,913,344)**	**34,330,197**	**9,693,339**	**6,841,873**
Other comprehensive income					
Items that will or may be reclassified subsequently to profit or loss					
Exchange differences on translating financial statements		(1,244,136)	1,458,166	-	-
Net (loss) gain on cash flow hedges		(2,918,846)	4,338,196	(18,470)	80,468
Net gain (loss) on hedges of net investments in foreign operations		518,302	(2,106,888)	-	-
Tax income (expense) relating to items that will or may be reclassified subsequently to profit or loss		(94,785)	(201,389)	3,694	(16,094)
Total items that will or may be reclassified subsequently to profit or loss		**(3,739,465)**	**3,488,085**	**(14,776)**	**64,374**
Item that will not be reclassified subsequently to profit or loss					
Gain (loss) on remeasurements of defined benefit plans	*22*	(339,645)	1,736,303	-	-
Tax income (expense) relating to item that will not be reclassified subsequently to profit or loss		94,251	(306,446)	-	-
Total item that will not be reclassified subsequently to profit or loss		**(245,394)**	**1,429,857**	**-**	**-**
Other comprehensive income (expense) for the year, net of tax		**(3,984,859)**	**4,917,942**	**(14,776)**	**64,374**
Total comprehensive income (expense) for the year		**(14,898,203)**	**39,248,139**	**9,678,563**	**6,906,247**
Total comprehensive income (expense) attributable to:					
Owners of the Company		(14,420,638)	36,112,095	9,678,563	6,906,247
Non-controlling interests	*13*	(477,565)	3,136,044	-	-
		(14,898,203)	**39,248,139**	**9,678,563**	**6,906,247**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF CHANGES IN EQUITY

Indorama Ventures Public Company Limited and its Subsidiaries

		Consolidated financial statements												
				Retained earnings			Other components of equity							
	Note	Issued and paid-up share capital	Share premium on ordinary shares	Legal reserve	Unappropriated	Subordinated perpetual debentures	Translation reserve	Hedging reserve	Excess of cost over book value of acquired subsidiaries	Differences arising from common control transactions	Total other components of equity	Equity attributable to owners of the Company	Non-controlling interests	Total equity
		(in thousand Baht)												
Year ended 31 December 2022														
Balance at 1 January 2022		**5,614,552**	**60,331,434**	**6,508,016**	**81,984,265**	**14,904,758**	**(6,036,111)**	**812,566**	**(4,115,246)**	**(1,235,562)**	**(10,574,353)**	**158,768,672**	**12,234,756**	**171,003,428**
Transactions with owners, recorded directly in equity														
Distribution to owners														
Dividends	*30*	-	-	-	(8,141,100)	-	-	-	-	-	-	(8,141,100)	(541,100)	(8,682,200)
Total distribution to owners		**-**	**-**	**-**	**(8,141,100)**	**-**	**-**	**-**	**-**	**-**	**-**	**(8,141,100)**	**(541,100)**	**(8,682,200)**
Change in ownership interests in subsidiaries														
Acquisition of non-controlling interests through business combination	*4*	-	-	-	-	-	-	-	-	-	-	-	66,015	66,015
Total change in ownership interests in subsidiaries		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**66,015**	**66,015**
Total transactions with owners, recorded directly in equity		**-**	**-**	**-**	**(8,141,100)**	**-**	**-**	**-**	**-**	**-**	**-**	**(8,141,100)**	**(475,085)**	**(8,616,185)**
Comprehensive income (expense) for the year														
Profit		-	-	-	31,006,084	-	-	-	-	-	-	31,006,084	3,324,113	34,330,197
Other comprehensive income (expense)		-	-	-	1,389,379	-	(458,828)	4,175,460	-	-	3,716,632	5,106,011	(188,069)	4,917,942
Total comprehensive income (expense) for the year		**-**	**-**	**-**	**32,395,463**	**-**	**(458,828)**	**4,175,460**	**-**	**-**	**3,716,632**	**36,112,095**	**3,136,044**	**39,248,139**
Coupon payment on subordinated perpetual debentures	*24*	-	-	-	(750,000)	-	-	-	-	-	-	(750,000)	-	(750,000)
Transfer to legal reserve		-	-	2,604,045	(2,604,045)	-	-	-	-	-	-	-	-	-
Balance at 31 December 2022		**5,614,552**	**60,331,434**	**9,112,061**	**102,884,583**	**14,904,758**	**(6,494,939)**	**4,988,026**	**(4,115,246)**	**(1,235,562)**	**(6,857,721)**	**185,989,667**	**14,895,715**	**200,885,382**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF CHANGES IN EQUITY

Indorama Ventures Public Company Limited and its Subsidiaries

		Consolidated financial statements												
				Retained earnings			Other components of equity							
	Note	Issued and paid-up share capital	Share premium on ordinary shares	Legal reserve	Unappropriated	Subordinated perpetual debentures	Translation reserve	Hedging reserve	Excess of cost over book value of acquired subsidiaries	Differences arising from common control transactions	Total other components of equity	Equity attributable to owners of the Company	Non-controlling interests	Total equity
							(in thousand Baht)							
Year ended 31 December 2023														
Balance at 1 January 2023		**5,614,552**	**60,331,434**	**9,112,061**	**102,884,583**	**14,904,758**	**(6,494,939)**	**4,988,026**	**(4,115,246)**	**(1,235,562)**	**(6,857,721)**	**185,989,667**	**14,895,715**	**200,885,382**
Transactions with owners, recorded directly in equity														
Distribution to owners														
Dividends	*30*	-	-	-	(6,456,735)	-	-	-	-	-	-	(6,456,735)	(712,523)	(7,169,258)
Total distribution to owners		-	-	-	**(6,456,735)**	-	-	-	-	-	-	**(6,456,735)**	**(712,523)**	**(7,169,258)**
Total transactions with owners, recorded directly in equity		-	-	-	**(6,456,735)**	-	-	-	-	-	-	**(6,456,735)**	**(712,523)**	**(7,169,258)**
Comprehensive income (expense) for the year														
Profit (loss)		-	-	-	(10,797,942)	-	-	-	-	-	-	(10,797,942)	(115,402)	(10,913,344)
Other comprehensive income (expense)		-	-	-	(237,007)	-	(733,332)	(2,652,357)	-	-	(3,385,689)	(3,622,696)	(362,163)	(3,984,859)
Total comprehensive income (expense) for the year		-	-	-	**(11,034,949)**	-	**(733,332)**	**(2,652,357)**	-	-	**(3,385,689)**	**(14,420,638)**	**(477,565)**	**(14,898,203)**
Coupon payment on subordinated perpetual debentures	*24*	-	-	-	(750,000)	-	-	-	-	-	-	(750,000)	-	(750,000)
Transfer to legal reserve		-	-	929,190	(929,190)	-	-	-	-	-	-	-	-	-
Balance at 31 December 2023		**5,614,552**	**60,331,434**	**10,041,251**	**83,713,709**	**14,904,758**	**(7,228,271)**	**2,335,669**	**(4,115,246)**	**(1,235,562)**	**(10,243,410)**	**164,362,294**	**13,705,627**	**178,067,921**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF CHANGES IN EQUITY

Indorama Ventures Public Company Limited and its Subsidiaries

		Separate financial statements						
				Retained earnings			Other component of equity	
	Note	Issued and paid-up share capital	Share premium on ordinary shares	Legal reserve	Unappropriated	Subordinated perpetual debentures	Hedging reserve	Total equity
					(in thousand Baht)			
Year ended 31 December 2022								
Balance at 1 January 2022		**5,614,552**	**60,331,434**	**566,601**	**21,452,782**	**14,904,758**	**619,770**	**103,489,897**
Transaction with owners, recorded directly in equity								
Distribution to owners								
Dividends	*30*	-	-	-	(8,141,100)	-	-	(8,141,100)
Total distribution to owners		**-**	**-**	**-**	**(8,141,100)**	**-**	**-**	**(8,141,100)**
Comprehensive income for the year								
Profit		-	-	-	6,841,873	-	-	6,841,873
Other comprehensive income		-	-	-	-	-	64,374	64,374
Total comprehensive income for the year		**-**	**-**	**-**	**6,841,873**	**-**	**64,374**	**6,906,247**
Coupon payment on subordinated perpetual debentures	*24*	-	-	-	(750,000)	-	-	(750,000)
Transfer to legal reserve		-	-	469	(469)	-	-	-
Balance at 31 December 2022		**5,614,552**	**60,331,434**	**567,070**	**19,403,086**	**14,904,758**	**684,144**	**101,505,044**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF CHANGES IN EQUITY

Indorama Ventures Public Company Limited and its Subsidiaries

		Separate financial statements						
				Retained earnings			Other component of equity	
	Note	Issued and paid-up share capital	Share premium on ordinary shares	Legal reserve	Unappropriated	Subordinated perpetual debentures	Hedging reserve	Total equity
					(in thousand Baht)			
Year ended 31 December 2023								
Balance at 1 January 2023		**5,614,552**	**60,331,434**	**567,070**	**19,403,086**	**14,904,758**	**684,144**	**101,505,044**
Transaction with owners, recorded directly in equity								
Distribution to owners								
Dividends	*30*	-	-	-	(6,456,735)	-	-	(6,456,735)
Total distribution to owners		**-**	**-**	**-**	**(6,456,735)**	**-**	**-**	**(6,456,735)**
Comprehensive income for the year								
Profit		-	-	-	9,693,339	-	-	9,693,339
Other comprehensive income		-	-	-	-	-	(14,776)	(14,776)
Total comprehensive income for the year		**-**	**-**	**-**	**9,693,339**	**-**	**(14,776)**	**9,678,563**
Coupon payment on subordinated perpetual debentures	*24*	-	-	-	(750,000)	-	-	(750,000)
Balance at 31 December 2023		**5,614,552**	**60,331,434**	**567,070**	**21,889,690**	**14,904,758**	**669,368**	**103,976,872**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF CASH FLOWS

Indorama Ventures Public Company Limited and its Subsidiaries

	Note	Consolidated financial statements Year ended 31 December 2023	2022	Separate financial statements Year ended 31 December 2023	2022
		(in thousand Baht)			
Cash flows from operating activities					
Profit (loss) for the year		(10,913,344)	34,330,197	9,693,339	6,841,873
Adjustments to reconcile profit (loss) to cash receipts (payments)					
Tax expense (income)	*28*	(2,683,811)	5,773,693	(406,352)	84,839
Finance costs		15,367,212	10,495,196	2,829,154	2,836,891
Depreciation	*14, 15*	24,834,630	22,893,326	-	-
(Reversal of) expected credit loss, net	*7*	(6,159)	41,594	-	-
Amortization of intangible assets and other assets		2,862,665	2,828,078	-	-
Employee benefits expense related to defined benefit plans	*22*	818,234	950,555	-	-
Foreign exchange (gain) loss, net		681,275	1,042,524	(212,575)	(38,575)
Unrealized (gain) loss on fair value adjustment of derivatives, net		497,250	(152,203)	-	-
Share of net (profit) loss of associate and joint ventures accounted for using equity method	*11*	(8,283)	22,761	-	-
Impairment loss of property, plant and equipment, goodwill and other intangible assets	*12, 14, 17, 18*	10,726,951	8,645,118	-	-
Provision for (reversal of) losses on inventories devaluation, net	*8*	(102,408)	2,098,472	-	-
(Gain) loss on disposal of property, plant and equipment, net		113,544	(120,690)	-	-
Impairment loss on investment in subsidiary	*10*	-	-	-	5,182,189
Loss on sale of investment in subsidiary		-	-	1,119	-
Finance income		(1,182,622)	(946,764)	(3,910,283)	(3,863,071)
Dividend income	*5*	-	-	(7,963,195)	(10,934,704)
		41,005,134	87,901,857	31,207	109,442
Changes in operating assets and liabilities					
Trade accounts receivable		3,773,892	5,971,192	-	-
Inventories		19,266,815	(15,779,619)	-	-
Other current assets		2,014,570	321,008	(438,956)	(19,591)
Other non-current assets		805,347	1,176,345	295	-
Trade accounts payable		(5,772,131)	6,731,266	-	-
Repayment of employee benefits expense related to defined benefit plans		(877,314)	(642,992)	-	-
Other current liabilities		(2,023,729)	1,708,668	(78,903)	297,120
Other non-current liabilities		656,488	(498,088)	-	-
Net cash generated from (used in) operating		58,849,072	86,889,637	(486,357)	386,971
Taxes paid		(5,715,356)	(8,908,533)	(112,068)	(99,292)
Net cash from (used in) operating activities		**53,133,716**	**77,981,104**	**(598,425)**	**287,679**

The accompanying notes form an integral part of the financial statements.

STATEMENT OF CASH FLOWS

Indorama Ventures Public Company Limited and its Subsidiaries

	Note	Consolidated financial statements Year ended 31 December 2023	2022	Separate financial statements Year ended 31 December 2023	2022
			(in thousand Baht)		
Cash flows from investing activities					
Net cash outflow on acquisitions of businesses	*4*	(68,038)	(46,232,915)	-	-
Cash outflow on payment of payable for acquiring joint operation	*12*	-	(288,730)	-	-
Cash outflow on additional investment in joint ventures	*11*	(99,208)	(188,042)	-	-
Proceed from sale of investment in subsidiary		-	-	7,050	-
Acquisition of other investments		(573,211)	(507,923)	-	-
Proceeds from sale of property, plant and equipment and capital expenditure prepayment		107,013	558,551	2,039,525	-
Acquisition of property, plant and equipment and capital expenditure prepayment		(24,009,324)	(25,631,343)	(1,185,450)	(751,795)
Proceeds from sale of intangible assets		65,913	90,100	-	-
Acquisition of intangible assets		(2,220,573)	(2,929,611)	-	-
Loans to subsidiaries, net		-	-	(10,438,188)	(3,008,024)
Proceeds from (paid for) loans to joint ventures, net		(438,094)	6,575	-	-
Cash received from forward contracts and cross currency swaps		389,041	-	-	-
Dividend received	*5*	-	-	7,963,195	10,934,704
Dividend received from joint ventures	*11*	14,403	19,953	-	-
Finance income received		1,178,864	945,071	4,081,837	3,632,319
Net cash from (used in) investing activities		**(25,653,214)**	**(74,158,314)**	**2,467,969**	**10,807,204**
Cash flows from financing activities					
Proceeds from bank overdrafts and loans with non-related parties	*20*	634,413,613	409,070,044	9,058,008	-
Repayment of bank overdrafts and loans with non-related parties	*20*	(641,382,932)	(389,332,180)	(11,449,738)	(6,775,996)
Proceeds from long-term loans from related parties	*20*	-	-	4,500,000	2,000,000
Proceeds from debentures, net of deferred issuance cost of debenture	*20*	9,982,044	11,980,430	9,982,044	11,980,430
Repayment of debentures	*20*	(5,277,593)	(7,756,431)	(4,100,000)	(6,545,000)
Payment of lease liabilities		(3,695,336)	(2,899,110)	-	-
Dividends paid to owners of the Company	*30*	(6,456,509)	(8,140,928)	(6,456,509)	(8,140,928)
Dividends paid to non-controlling interests		(712,523)	(541,100)	-	-
Finance costs paid		(14,714,910)	(9,731,510)	(2,722,587)	(2,687,088)
Deferred financing cost paid		(315,364)	(383,333)	-	(322,810)
Coupon payment on subordinated perpetual debentures	*24*	(750,000)	(750,000)	(750,000)	(750,000)
Net cash from (used in) financing activities		**(28,909,510)**	**1,515,882**	**(1,938,782)**	**(11,241,392)**
Net increase (decrease) in cash and cash equivalents, before effect of exchange rates changes		(1,429,008)	5,338,672	(69,238)	(146,509)
Effect of exchange rate changes on cash and cash equivalents		(1,099,533)	(342,778)	-	-
Net increase (decrease) in cash and cash equivalents		**(2,528,541)**	**4,995,894**	**(69,238)**	**(146,509)**
Cash and cash equivalents at 1 January		21,211,149	16,215,255	73,523	220,032
Cash and cash equivalents at 31 December	*6*	**18,682,608**	**21,211,149**	**4,285**	**73,523**

The accompanying notes form an integral part of the financial statements.

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

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These notes form an integral part of the financial statements.

The financial statements issued for Thai statutory and regulatory reporting purposes are prepared in the Thai language. These English language financial statements have been prepared from the Thai language statutory financial statements, and were approved and authorized for issue by the Board of Directors on 23 February 2024.

1 General information

Indorama Ventures Public Company Limited (the "Company") is incorporated in Thailand and was listed on the Stock Exchange of Thailand in February 2010. The Company's registered office at 75/102, Ocean Tower II, 37th Floor, Sukhumvit 19, Asoke Road, Klongtoeynua, Wattana, Bangkok, Thailand.

The ultimate parent company during the financial year was Canopus International Limited, incorporated in Mauritius.

The principal activities of the Company, its subsidiaries, and joint operation (collectively referred to as the "Group") are the manufacture and distribution of Polyethylene Terephthalate ("PET"), Purified Terephthalic Acid ("PTA"), Paraxylene ("PX"), recycling, Purified Isophthalic Acid ("PIA"), Naphthalene Dicarboxylate ("NDC"), PET preforms and packaging, Integrated EG, Integrated purified EO, PO/MTBE, Integrated Surfactants comprising EOA, LAB and others, Fibers including Polyester, Rayon, Nylon, Polypropylene, composites and worsted wool fibers products. Details of the Company's subsidiaries, an associate, joint ventures, and a joint operation as at 31 December 2023 and 2022 are given in note 5, 11, and 12.

2 Basis of preparation of the financial statements

The financial statements are prepared in accordance with Thai Financial Reporting Standards ("TFRS"), guidelines promulgated by the Federation of Accounting Professions and applicable rules and regulations of the Thai Securities and Exchange Commission. The financial statements are presented in Thai Baht, which is the Company's functional currency. The accounting policies, described in note 3, have been applied consistently to all periods presented in these financial statements.

The preparation of financial statements in conformity with TFRS requires management to make judgments, estimates and assumptions that affect the application of the Group's/Company's accounting policies. Actual results may differ from these estimates. Estimates and underlying assumptions that are described in note 3 are reviewed on an ongoing basis. Revisions to accounting estimates are recognized prospectively.

3 Significant accounting policies

(a) Basis of consolidation

The consolidated financial statements relate to the Company and its subsidiaries and joint operations (collectively referred to as the "Group") and the Group's interests in associate and joint ventures.

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

At the acquisition date, the Group measures any non-controlling interest at its proportionate interest in the identifiable net assets of the acquiree. In addition, when there is a change in the Group's interest in a subsidiary that does not result in a loss of control, any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received from the acquisition or disposal of the non-controlling interests with no change in control is accounted for as other surplus/deficit in shareholders' equity.

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities, any related non-controlling interests and other components of equity of the subsidiary. Any resulting gain or loss is recognized in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement.

Investment in joint operation is accounted for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the TFRSs applicable to the particular assets, liabilities, revenues and expenses.

Associate is an entity in which the Group has significant influence, but not control or joint control, over the financial and operating policies.

A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

The Group recognized investments in associate and joint ventures using the equity method in the consolidated financial statements. They are initially recognized at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include the Group's dividend income and share of the profit or loss and other comprehensive income ("OCI") of equity-accounted investees, until the date on which significant influence or joint control ceases.

Intra-group balances and transactions, and any unrealized income or expenses arising from intra-group transactions, are eliminated on consolidation. Unrealized gains arising from transactions with associate and joint ventures are eliminated against the investment to the extent of the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

Business combinations

The Group applies the acquisition method when the Group assesses that the acquired set of activities and assets include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create an output. The acquisition date is the date on which control is transferred to the Group, other than business combinations with entities under common control. Expenses in connection with a business combination are recognized as incurred.

Goodwill is measured at the acquisition date as the fair value of the consideration transferred including the recognized amount of any non-controlling interest in the acquiree, less net fair value of the identifiable assets acquired and liabilities assumed. Any gain on bargain purchase is recognized in profit or loss immediately.

Consideration transferred includes assets transferred, any contingent consideration and equity interests issued by the Group.

Any contingent consideration is measured at fair value at the date of acquisition, and remeasured at fair value at each reporting date. Subsequent changes in the fair value are recognized in profit or loss.

A contingent liability of the acquiree is assumed in a business combination only if such a liability represents a present obligation and arises from a past event, and its fair value can be measured reliably.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group estimates provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period, or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognized in profit or loss or other comprehensive income. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are recognized as would be required if that interest were disposed of.

Business combination under common control are accounted for using a method similar to the pooling of interest method, by recognizing assets and liabilities of the acquired businesses at their carrying amounts in the consolidated financial statements of the ultimate parent company at the transaction date. The difference between the carrying amount of the acquired net assets and the consideration transferred is recognized as surplus or deficit from business combinations under common control in shareholder's equity. The surplus or deficit will be written off upon divestment of the businesses acquired. The results from operations of the acquired businesses will be included in the consolidated financial statements of the acquirer from the beginning of the comparative period or the moment the businesses came under common control, whichever date is later, until control ceases.

(b) Investments in subsidiaries

Investments in subsidiaries in the separate financial statements are measured at cost less allowance for impairment losses. Dividend income is recognized in profit or loss on the date on which the Company's right to receive payment is established. If the Company disposes of part of its investment, the deemed cost of the part sold is determined using the weighted average method. Gains and losses on disposal of the investments are recognized in profit or loss.

(c) Foreign currencies

Transactions in foreign currencies including non-monetary assets and liabilities denominated in foreign currencies are translated to the respective functional currencies of each entity in the Group at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rate at the reporting date. Non-monetary assets and liabilities measured at fair value in foreign currencies are translated at the exchange rates at the dates that fair value was determined.

Foreign currency differences are generally recognized in profit or loss. However, foreign currency differences arising from the translation of the following items are recognized in other comprehensive income:

- a financial liability designated as a hedge of the net investment in a foreign operation to the extent that the hedge is effective; and
- qualifying cash flow hedges to the extent the hedge is effective.

Foreign operations

Goodwill, gain on bargain purchase and fair value adjustments arising on the acquisition of foreign operations at the acquisition date are initially translated to Thai Baht at the exchange rates at the dates that fair value was determined.

The assets and liabilities of foreign operations, including the carrying amount of the goodwill and fair value adjustments arising on acquisition, are translated to Thai Baht at the exchange rates at the reporting date. The revenues and expenses of foreign operations are translated to Thai Baht at rates approximating the exchange rates at the dates of the transactions.

Foreign exchange differences and the effective portion of any foreign currency differences arising from hedges of a net investment in a foreign operation (see note 3(d.4)) are recognized in other comprehensive income and accumulated in the translation reserve until disposal of the investment, except to the extent that the translation difference is allocated to non-controlling interests.

When a foreign operation is disposed of in its entirety or partially such that control, significant influence or joint control is lost, the cumulative amount in the translation reserve related to that foreign operation is reclassified to profit or loss as part of the gain or loss on disposal. If the Group disposes of part of its interest in a subsidiary but retains control, then the relevant proportion of the cumulative amount is reattributed to non-controlling interests. When the Group disposes of only part of an associate or joint venture while retaining significant influence or joint control, the relevant proportion of the cumulative amount is reclassified to profit or loss.

When the settlement of a monetary item receivable from or payable to a foreign operation is neither planned nor likely in the foreseeable future, exchange gains and losses arising from such a monetary item are considered to form part of a net investment in a foreign operation and are recognized in other comprehensive income, and presented in the translation reserve in equity until disposal of the investment.

(d) Financial instruments

(d.1) Classification and measurement

Debt securities issued by the Group/Company are initially recognized when they are originated. Other financial assets and financial liabilities (except trade accounts receivable (see note 3(f)) are initially recognized when the Group/Company becomes a party to the contractual provisions of the instrument, and measured at fair value.

On initial recognition, a financial asset is classified as measured at: amortized cost; fair value through other comprehensive income (FVOCI); or FVTPL. Financial assets are not reclassified subsequent to their initial recognition unless the Group/Company changes its business model for managing financial assets, in which case all affected financial assets are reclassified prospectively from the reclassification date.

On initial recognition, financial liabilities are classified as measured at amortized cost using the effective interest method or FVTPL. Interest expense, foreign exchange gains and losses and any gain or loss on derecognition are recognized in profit or loss.

Financial assets measured at amortized costs are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by expected credit losses. Interest income, foreign exchange gains and losses, expected credit loss and any gain or loss on derecognition are recognized in profit or loss.

(d.2) Derecognition and offset

The Group/Company derecognizes a financial asset when the contractual rights to receive the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Group/Company neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group/Company derecognizes a financial liability when its contractual obligations are discharged or cancelled, or expire. The Group/Company also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value.

The difference between the carrying amount extinguished and the consideration received or paid is recognized in profit or loss.

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group/Company currently has a legally enforceable right to set off the amounts and the Group/Company intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

(d.3) Derivatives

Derivatives are recognized at fair value and remeasured at fair value at each reporting date. The gain or loss on remeasurement to fair value is recognized immediately in profit or loss, except where the derivatives qualify for cash flow hedge accounting or hedges of net investment in a foreign operation, in which case recognition of any resultant gain or loss depends on the nature of the item being hedged (see note 3(d.4)). Embedded derivatives are separated from the host contract and accounted for separately if the host contract is not a financial asset and certain criteria are met.

(d.4) Hedging

At inception of designated hedging relationships, the Group/Company documents the risk management objective and strategy for undertaking the risk, the economic relationship between the hedged item and the hedging instrument, including consideration of the hedge effectiveness at the inception of the hedging relationship and throughout the remaining period to determine the existence of economic relationship between the hedged item and the hedging instrument.

Cash flow hedges

When a derivative is designated as a cash flow hedging instrument, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income and accumulated in the hedging reserve. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

The Group/Company designates only the change in fair value of the spot element of forward exchange contracts as the hedging instrument in the cash flow hedging relationships. The change in fair value of the forward element of forward exchange contracts (forward points) is recognized in a cash flow hedging reserve within equity.

When the hedged forecast transaction subsequently results in the recognition of a non-financial item such as inventory, the amount accumulated in the cash flow hedging reserve is included directly in the initial cost of the non-financial item when it is recognized.

For all other hedged forecast transactions, the amount accumulated in the cash flow hedging reserve is reclassified to profit or loss in the same period or periods during which the hedged expected future cash flows affect profit or loss.

If the hedge no longer meets the criteria for hedge accounting or the hedging instrument is sold, expires, is terminated or is exercised, then hedge accounting is discontinued prospectively. When hedge accounting for cash flow hedges is discontinued, the amount that has been accumulated in the cash flow hedging reserve remains in equity until, for a hedge of a transaction resulting in the recognition of a non-financial item, it is included in the non-financial item's cost on its initial recognition or, for other cash flow hedges, it is reclassified to profit or loss in the same period or periods as the hedged expected future cash flows affect profit or loss.

If the hedged future cash flows are no longer expected to occur, then the amounts that have been accumulated in the cash flow hedging reserve are immediately reclassified to profit or loss.

Net investment hedges

When a derivative instrument or a non-derivative financial liability is designated as the hedging instrument, the effective portion of, for a derivative changes in the fair value of the hedging instrument and, for a non-derivative, foreign exchange gains and losses is recognized in other comprehensive income and presented in the translation reserve within equity. Any ineffective portion is recognized immediately in profit or loss. The amount recognized in other comprehensive income is reclassified to profit or loss as a reclassification adjustment on disposal of the foreign operation.

(d.5) Impairment of financial assets other than trade accounts receivable

The Group/Company recognizes allowances for expected credit losses (ECLs) on financial assets measured at amortized cost and loan commitments issued which are not measured at FVTPL.

The Group/Company recognizes ECLs equal to 12-month ECLs unless there has been a significant increase in credit risk of the financial instrument since initial recognition or credit-impaired financial assets, in which case the loss allowance is measured at an amount equal to lifetime ECLs.

ECLs are a probability-weighted estimate of credit losses based on forward-looking and historical experience. Credit losses are measured as the present value of all cash shortfalls discounted by the effective interest rate of the financial asset.

The Group/Company considers a financial asset to have low credit risk when its credit rating is equivalent to the globally understood definition of 'investment grade'. The Group/Company recognizes ECLs for low credit risk financial asset as 12-month ECLs.

The Group/Company assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due, significant deterioration in credit rating, significant deterioration in the operating results of the debtor and existing or forecast changes in the technological, market, economic or legal environment that have a significant adverse effect on the debtor's ability to meet its obligation to the Group/Company.

The Group/Company considers a financial asset to be in default when:
- the debtor is unlikely to pay its credit obligations to the Group/Company in full, without recourse by the Group/Company takes action such as realizing security (if any is held); or
- the financial asset is more than 12 months past due.

(d.6) Write-off

The gross carrying amount of a financial asset is written off when the Group/Company has no reasonable expectations of recovering. Subsequent recoveries of an asset that was previously written off, are recognized as a reversal of impairment in profit or loss in the period in which the recovery occurs.

(d.7) Interest

Interest income and expense is recognized in profit or loss using the effective interest method. In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortized cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

(e) Cash and cash equivalents

Cash and cash equivalents comprise cash balances, call deposits and highly liquid short-term investments which have maturities of three months or less from the date of acquisition.

(f) Trade accounts receivable

A trade receivable is recognized when the Group/Company has an unconditional right to receive consideration. A trade receivable is measured at transaction price less allowance for expected credit loss. Bad debts are written off when incurred.

The Group/Company estimates lifetime expected credit losses (ECLs), using a provision matrix to find the ECLs rates. This method groups the debtors based on shared credit risk characteristics and past due status, taking into account historical credit loss data, adjusted for factors that are specific to the debtors and an assessment of both current economic conditions and forward-looking general economic conditions at the reporting date.

(g) Inventories

Inventories are measured at the lower of cost and net realizable value. Cost is calculated using the weighted average cost principle. Cost includes direct costs incurred in acquiring the inventories. In the case of manufactured inventories and work-in-progress, cost includes an appropriate share of production overheads based on normal operating capacity. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs to complete and to make the sale.

(h) Property, plant and equipment

Property, plant and equipment are measured at cost less accumulated depreciation and impairment losses.

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes capitalized borrowing costs, and the costs of dismantling and removing the items and restoring the site on which they are located including transfers from other comprehensive income of any gain or loss on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment. Purchased software that is integral to the functionality of the related equipment is capitalized as part of that equipment.

Differences between the proceeds from disposal and the carrying amount of property, plant and equipment are recognized in profit or loss.

Subsequent costs

The cost of replacing a part of an item of property, plant and equipment is recognized in the carrying amount of the item when the future economic benefits embodied within the part will flow to the Group, and its cost can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing of property, plant and equipment are recognized in profit or loss as incurred.

Depreciation

Depreciation is calculated on a straight-line basis over the estimated useful lives of each component of an asset and recognized in profit or loss. No depreciation is provided on freehold land and assets under construction.

The estimated useful lives are as follows:

Land improvements	3-50	years
Buildings and building improvements	2-60	years
Machinery and equipment	2-50	years
Office furniture, fixtures and equipment	2-25	years
Transportation equipment	2-27	years
Stores and spares	2-15	years

(i) Goodwill

Goodwill is measured at cost less accumulated impairment losses. In respect of equity-accounted investee, the carrying amount of goodwill is included in the carrying amount of the investment. Internally generated goodwill and brands are recognized in profit or loss as incurred.

(j) Research and development

Development expenditure is capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditure and expenditure on research activities are recognized in profit or loss as incurred.

Capitalized development expenditure is measured at cost less accumulated amortization and impairment losses. The expenditure cost includes the cost of materials, direct labour, overhead costs that are directly attributable to preparing the asset for its intended use, and borrowing costs. Subsequent expenditure is capitalized only when it increases the future economic benefits.

(k) Other intangible assets

Other intangible assets that have indefinite useful lives are measured at cost less impairment losses. Other intangible assets are measured at cost less accumulated amortization and impairment losses. Subsequent expenditure is capitalized only when it will generate future economic benefits. Amortization is calculated on a straight-line basis over the estimated useful lives of intangible assets and recognized in profit or loss.

The estimated useful lives are as follows:

Rights acquired	5-50	years	
Supplier contract and relationships	3-20	years,	Indefinite
Software licenses	1-37	years	
Technology licenses and knowhow	1-50	years	
Customer contracts and relationships	1.5-40	years	
Trade name and trademarks	1-21.5	years,	Indefinite
Chemicals exchange contract	19	years	
Capitalized development expenditure	3-10	years	
Environment rights	1-6	years	

(l) Leases

At inception of a contract, the Group assesses that a contract is, or contains, a lease when it conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

As a lessee

At commencement or on modification of a contract, the Group allocates the consideration in the contract to each lease component on the basis of its relative stand-alone prices of each component. For the leases of property, the Group has elected not to separate non-lease components and accounted for the lease and non-lease components wholly as a single lease component.

The Group recognizes a right-of-use asset and a lease liability at the lease commencement date, except for leases of low-value assets and short-term leases which are recognized as expenses on a straight-line basis over the respective lease terms.

Right-of-use asset is measured at cost, less any accumulated depreciation and impairment loss, and adjusted for any remeasurements of lease liability. The cost of right-of-use asset includes the initial amount of the lease liability adjusted for any prepaid lease payments, plus any initial direct costs incurred and an estimate of restoration costs, less any lease incentives received. Depreciation is charged to profit or loss on a straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment.

The lease liability is initially measured at the present value of all lease payments that shall be paid under the lease. The Group uses the incremental borrowing rate to discount the lease payments to the present value. The Group determines its incremental borrowing rate by obtaining interest rates from various external financing sources and makes certain adjustments to reflect the terms of the lease and type of the asset leased.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when there is a lease modification, or a change in the assessment of options specified in the lease. When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the right-of-use asset or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

As a lessor

At inception or on modification of a contract, the Group allocates the consideration in the contract to each component on the basis of their relative standalone selling prices.

At lease inception, the Group considers to classify a lease that transfers substantially all of the risks and rewards incidental to ownership of the underlying asset to lessees as a finance lease. A lease that does not meet this criteria is classified as an operating lease.

The Group recognizes finance lease receivables at the net investment of the leases, which includes the present value of the lease payments, and any unguaranteed residual value, discounted using the interest rate implicit in the lease. Finance lease income reflects a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

The Group recognizes lease payments received under operating leases in profit or loss on a straight-line basis over the lease term as part of other income. Initial direct costs incurred in arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as other income in the accounting period in which they are earned.

The Group estimates lifetime expected credit losses (ECLs), using a provision matrix to find ECLs rate. This method groups the lease receivables based on shared credit risk characteristics and past due status, taking into account historical credit loss data, adjusted for factors that are specific to the debtors and an assessment of both current economic conditions and forward-looking general economic conditions at the reporting date. The Group derecognizes the lease receivables as disclosed in note 3(d.2).

(m) Impairment of non-financial assets

The carrying amounts of the Group's/Company's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the assets' recoverable amounts are estimated. For goodwill and intangible assets that have indefinite useful lives or are not yet available for use, the recoverable amount is estimated each year at the same time.

An impairment loss is recognized in profit or loss if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount.

The recoverable amount is the greater of the asset's value in use and fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

An impairment loss of asset recognized in prior periods is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss in respect of goodwill is not reversed. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(n) Employee benefits

Defined contribution plans

Obligations for contributions to the Group's defined contribution plans are expensed as the related service is provided.

Defined benefit plans

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods. The defined benefit obligations is discounted to the present value, which performed annually by a qualified actuary using the projected unit credit method.

Remeasurements of the net defined benefit liability, actuarial gain or loss are recognized immediately in other comprehensive income. The Group determines the interest expense on the net defined benefit liability for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period, taking into account any changes in the net defined benefit liability during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

The Group's net obligation in respect of long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value. Remeasurements are recognized in profit or loss in the period in which they arise.

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs for a restructuring. If benefits are not expected to be settled wholly within 12 months of the end of the reporting period, then they are discounted.

Short-term employee benefits are expensed as the related service is provided. A liability is recognized for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

(o) Share-based payments

The grant-date fair value of equity-settled share-based payment awards granted to employees is generally recognized as an expense, with a corresponding increase in equity, over the vesting period of the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized is based on the number of awards that meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant-date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes.

The fair value of the amount payable to employees in respect of share appreciation rights, which are settled in cash, is recognized as an expense with a corresponding increase in liabilities, over the period that the employees become unconditionally entitled to payment. The liability is remeasured at each reporting date and at settlement date. Any changes in the fair value of the liability are recognized as personnel expenses in profit or loss.

(p) Provisions

A provision is recognized if, as a result of a past event, the Group/Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as a finance cost.

Onerous contracts

A provision for onerous contracts is recognized when the expected benefits to be derived by the Group/Company from a contract are lower than the unavoidable cost of meeting the Group's/Company's obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract. Before a provision is established, the Group/Company recognizes any impairment loss on the assets associated with that contract.

(q) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in the principal or, in its absence, the most advantageous market to which the Group/Company has access at that date. The fair value of a liability reflects its non-performance risk.

When measuring the fair value of an asset or liability, the Group/Company uses observable market data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- Level 1: quoted prices in active markets for identical assets or liabilities.
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: inputs for the asset or liability that are based on unobservable input.

The Group/Company recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

If an asset or a liability measured at fair value has a bid price and an ask price, then the Group/Company measures assets and asset positions at a bid price and liabilities and liability positions at an ask price.

The best evidence of the fair value of a financial instrument on initial recognition is normally the transaction price - i.e. the fair value of the consideration given or received. If the Group/Company determines that the fair value on initial recognition differs from the transaction price, the financial instrument is initially measured at fair value adjusted for the difference between the fair value on initial recognition and the transaction price and the difference is recognized in profit or loss immediately. However, for the fair value categorized as level 3, such difference is deferred and will be recognized in profit or loss on an appropriate basis over the life of the instrument or until the fair value level is transferred or the transaction is closed out.

(r) Subordinated perpetual debentures

Subordinated perpetual debentures are recognized as equity when the Company has the sole right and discretion to unconditionally defer principal repayment, interest and cumulative interest payment without time and deferral amount limitation. Accordingly, any coupon payments are accounted for as dividends and are recognized directly in equity at the time the payment obligation arises. This is because the coupon payments are discretionary and relate to equity. Coupon payments consequently do not have any impact in profit or loss. Coupon payments are recognized in the cash flow statement in the same way as dividends to ordinary shareholders.

When subordinated perpetual debentures recognized as equity are repurchased, the amount of the consideration paid, which includes directly attributable costs, is recognized as a deduction from equity.

(s) Revenue from contracts with customers

(1) Revenue recognition

Revenue is recognized when a customer obtains control of the goods or services in an amount that reflects the consideration to which the Group/Company expects to be entitled, excluding those amounts collected on behalf of third parties, and value added tax and is after deduction of any trade discounts and volume rebates.

Revenue from sales of goods is recognized on the date on which the goods are delivered to the customers.

Revenue for rendering of services is recognized over time based on stage of completion/as the services are provided. The stage of completion is assessed based on cost-to-cost method. The related costs are recognized in profit or loss when they are incurred.

Guarantee and royalty income are recognized over time as the services are provided.

Long-term advance received from customers is recognized as revenue when the Group transferred control over the goods or services to the customers. For the advances that contain a significant financing component, they include the interest expense accreted on the contract liability under the effective interest method. The Group/Company uses the practical expedient which is to not adjust the consideration for any effects of a significant financing component for the contract for which the period is 12 months or less.

(2) Contract balances

Contract liabilities including short-term and long-term advances received from customers are the obligation to transfer goods or servies to the customer. The contract liabilities including short-term and long-term advances received from customers are recognized when the Group receives or has an unconditional right to receive non-refundable consideration from the customer before the Group recognizes the related revenue.

A refund liability is the obligation to refund some or all of the consideration received from the customer and is measured at the amount the Group ultimately expects it will have to return to the customer. The refund liability is reassessed at each reporting date and the Group makes a corresponding change to the amount of revenue recognized.

(t) Income tax

Income tax expense for the year comprises current and deferred tax, which is recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

Current tax is recognized in respect of the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for the temporary differences: the initial recognition of goodwill; the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss; and differences relating to investments in subsidiaries and joint ventures to the extent that it is probable that they will not reverse in the foreseeable future.

The measurement of deferred tax reflects the tax consequences that would follow the manner in which the Group/Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities, using tax rates enacted or substantively enacted at the reporting date. Current deferred tax assets and liabilities are offset in the separate financial statements.

A deferred tax asset is recognized to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilized. Deferred tax assets are reviewed at each reporting date and reduced to the extent that it is no longer probable that the related tax benefit will be realized.

(u) Earnings per share

Basic earnings per share EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the Company less coupon payment on subordinated perpetual debentures whether it has been accrued or not, by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held.

Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders of the Company and the weighted average number of ordinary shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares.

(v) Related parties

A related party is a person or entity that has direct or indirect control or joint control, or has significant influence over the financial and managerial decision-making of the Group/Company; a person or entity that is under common control or under the same significant influence as the Group/Company; or a person or entity over which the Group/Company has direct or indirect control or joint control or has significant influence over the financial and managerial decision-making.

(w) Segment reporting

Segment results that are reported to the Group's chief operating decision maker include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate assets (primarily the Company's headquarters and international business center), international business center expenses, and tax assets and liabilities.

4 Acquisitions of businesses

Goodwill

The goodwill arising from acquisitions occurring in the year ended 31 December 2022 is as following:

	Note	2022
		(in thousand Baht)
UCY Polymers CZ s.r.o., Czech Republic	*4(i)*	72,148
Oxiteno S.A. - Indústria e Comércio, Brazil	*4(ii)*	-
Ngoc Nghia Industry - Service - Trading Joint Stock Company, Vietnam	*4(iii)*	553,953
Filatura Tollegno 1900 S.r.l., Italy	*4(iv)*	-
Total goodwill		**626,101**

(i) UCY Polymers CZ s.r.o. ("UCY"), Czech Republic

On 18 February 2022, the Company, through its indirect subsidiary, Indorama Netherlands B.V., entered into an Agreement for the purchase of participation in UCY and a related Shareholders' Agreement with Mr. Maximilian Josef Söllner (the "Transaction"). The Transaction completed on the same day. The initial consideration for the acquisition of the 85% equity stake in UCY was EUR 6.7 million (Baht 240.9 million), it was decreased to a reduced initial consideration of EUR 3.5 million (Baht 126.9 million) by a repayment of loans from the former shareholder outstanding as at the acquisition date amounting to EUR 3.2 million (Baht 114.0 million). The Transaction was accounted for as a business combination. During the period from acquisition date to 31 December 2022, the business contributed revenue of CZK 202.6 million (Baht 303.2 million) and net loss of CZK 92.0 million (Baht 137.7 million) to the Group's results. If the acquisition had occurred on 1 January 2022, management estimates that consolidated revenue and consolidated net profit for the year would have increased by Baht 45.5 million and Baht 2.4 million, respectively. In determining these amounts, management has assumed that the fair value adjustments, that arose on the date of acquisition would have been the same if the acquisition had occurred on 1 January 2022.

Identifiable assets acquired and liabilities assumed	*Note*	**Fair values as at 18 February 2022**
		(in thousand Baht)
Cash and cash equivalents		1,104
Inventories		35,811
Trade receivables		15,973
Property, plant and equipment	*14*	239,176
Short-term loan from former shareholder	*20*	(114,022)
Accounts payable		(107,017)
Deferred tax liabilities, net	*28*	(30,750)
Other assets/(liabilities), net		24,175
Total identifiable net assets received		**64,450**
Controlling interest (%)		85.00
Total fair value of identifiable net assets received		**54,783**
Goodwill		72,148
Purchase consideration transferred		**126,931**
Cash acquired		(1,104)
Consideration payable		(36,526)
Net cash outflows		**89,301**

The trade receivables comprised gross contractual amounts due of Baht 16.0 million which the entire amount was expected to be collectible at the acquisition date.

The consideration amount of EUR 1.0 million (Baht 36.5 million) was payable as of 31 December 2022. The consideration amount of EUR 0.5 million (Baht 18.2 million) was paid in January 2023 and the remaining balance of EUR 0.5 million (Baht 19.0 million) included in other current liabilities.

(ii) Oxiteno S.A. - Indústria e Comércio ("Oxiteno"), Brazil

On 1 April 2022, the Company, through its indirect subsidiaries, Tereftálicos Indústria e Participações Ltda. and Indorama Ventures Spain S.L., completed the acquisition of a 100% equity stake in Oxiteno from its existing shareholders as per the definitive Share Purchase Agreement dated 15 August 2021 for a cash consideration of BRL 6,694.2 million (Baht 47,535.8 million). The transaction was accounted for as a business combination. During the period from acquisition date to 31 December 2022, the business contributed revenue of BRL 6,377.4 million (Baht 44,443.8 million) and net profit of BRL 938.1 million (Baht 6,537.3 million) to the Group's results. If the acquisition had occurred on 1 January 2022, management estimates that consolidated revenue and consolidated net profit for the year would have increased by Baht 10,866.5 million and Baht 1,885.8 million, respectively. In determining these amounts, management has assumed that the fair value adjustments, that arose on the date of acquisition would have been the same if the acquisition had occurred on 1 January 2022.

Identifiable assets acquired and liabilities assumed	*Note*	**Fair values as at 1 April 2022**
		(in thousand Baht)
Cash and cash equivalents		1,466,726
Inventories		11,571,753
Trade receivables		7,149,279
Property, plant and equipment	*14*	26,966,701
Investment in associate		114,792
Right-of-use assets	*15*	187,782
Short-term loans from financial institutions	*20*	(657,551)
Long-term loans from financial institutions	*20*	(95,446)
Accounts payable		(6,212,004)
Lease liabilities		(203,085)
Provisions for employee benefits		(67,498)
Deferred tax assets, net	*28*	2,088,123
Other assets/(liabilities), net		5,226,190
Total identifiable net assets received		**47,535,762**
Controlling interest (%)		100.00
Total fair value of identifiable net assets received		**47,535,762**
Goodwill		-
Purchase consideration transferred		**47,535,762**
Cash acquired		(1,466,726)
Consideration receivable		106,822
Consideration payable		(4,576,194)
Net cash outflows		**41,599,664**

The trade receivables comprised gross contractual amounts due of Baht 7,243.1 million, of which Baht 93.8 million was expected to be uncollectible at the acquisition date.

The consideration receivable was received in December 2022. As at 31 December 2023 and 2022, the consideration payable which is due in April 2024 is included in other current liabilities and other non current liabilities, BRL 717.4 millions (Baht 5,071.4 million) and BRL 736.2 million (Baht 4,877.2 million), respectively.

(iii) Ngoc Nghia Industry - Service - Trading Joint Stock Company ("NNC"), Vietnam

On 21 April 2022, the Company, through its indirect subsidiary, Indorama Netherlands B.V. completed the acquisition of 97.8% equity stake in NNC from its existing shareholders as per the definitive Share Purchase Agreement dated 12 April 2022 for a cash consideration amounting to VND 2,090.1 billion (Baht 3,078.8 million). The transaction was accounted for as a business combination. During the period from acquisition date to 31 December 2022, the business contributed revenue of VND 1,620.3 billion (Baht 2,475.8 million) and net profit of VND 239.4 billion (Baht 365.7 million) to the Group's results. If the acquisition had occurred on 1 January 2022, management estimates that consolidated revenue and consolidated net profit for the year would have increased by Baht 985.7 million and Baht 12.3 million, respectively. In determining these amounts, management has assumed that the fair value adjustments, that arose on the date of acquisition would have been the same if the acquisition had occurred on 1 January 2022.

Identifiable assets acquired and liabilities assumed	*Note*	**Fair values as at 21 April 2022**
		(in thousand Baht)
Cash and cash equivalents		37,073
Inventories		286,810
Trade receivables		555,244
Property, plant and equipment	*14*	1,643,666
Right-of-use assets	*15*	616,523
Intangible assets	*18*	587,099
Accounts payable		(228,606)
Short-term loans from financial institutions	*20*	(537,084)
Long-term loans from financial institutions	*20*	(303,800)
Lease liabilities		(75,904)
Deferred tax liabilities, net	*28*	(130,482)
Other assets/(liabilities), net		130,791
Total identifiable net assets received		**2,581,330**
Controlling interest (%)		97.81
Total fair value of identifiable net assets received		**2,524,799**
Goodwill		553,953
Purchase consideration transferred		**3,078,752**
Cash acquired		(37,073)
Net cash outflows		**3,041,679**

The trade receivables comprised gross contractual amounts due of Baht 683.9 million, of which Baht 128.7 million was expected to be uncollectible at the acquisition date.

(iv) Filatura Tollegno 1900 S.r.l. ("Tollegno"), Italy

On 1 July 2022, the Company, through its indirect subsidiary, Indorama Netherlands B.V. completed the acquisition of 100% equity stake in Tollegno from its existing shareholders as per the Sale and Purchase Agreement dated 24 February 2022 for a cash consideration amounting to EUR 46.2 million (Baht 1,715.9 million). The transaction was accounted for as a business combination. During the period from acquisition date to 31 December 2022, the business contributed revenue of EUR 37.0 million (Baht 1,364.1 million) and net profit of EUR 2.0 million (Baht 72.3 million) to the Group's results. If the acquisition had occurred on 1 January 2022, management estimates that consolidated revenue and consolidated net profit for the year would have increased by Baht 1,793.2 million and Baht 200.8 million, respectively. In determining these amounts, management has assumed that the fair value adjustments, that arose on the date of acquisition would have been the same if the acquisition had occurred on 1 January 2022.

Identifiable assets acquired and liabilities assumed	*Note*	**Fair values as at 1 July 2022**
		(in thousand Baht)
Inventories		1,345,740
Trade receivables		977,696
Property, plant and equipment	*14*	325,610
Right-of-use assets	*15*	463,849
Intangible assets	*18*	4,950
Accounts payable		(821,393)
Bank overdrafts	*20*	(1,264)
Lease liabilities		(442,378)
Deferred tax liabilities, net	*28*	(66,420)
Provisions for employee benefits		(42,636)
Other assets/(liabilities), net		(27,845)
Total identifiable net assets received		**1,715,909**
Controlling interest (%)		100.00
Total fair value of identifiable net assets received		**1,715,909**
Goodwill		-
Purchase consideration transferred		**1,715,909**
Contingent consideration		(148,527)
Consideration payable		(86,698)
Net cash outflows		**1,480,684**

The trade receivables comprised gross contractual amounts due of Baht 977.7 million, which the entire amount was expected to be collectible at the acquisition date.

The consideration payable was paid in December 2022. The payment of contingent consideration is subject to the conditions set out in the Sale and Purchase Agreement. The consideration amount of EUR 1.3 million (Baht 49.8 million) was paid in September 2023 and the remaining balance of EUR 3.1 million (Baht 116.5 million) in included in other current liabilities.

5 Related parties

Relationship with ultimate parent company is disclosed in note 1.

Relationship with a joint operation is described in note 12.

Relationships with an immediate parent, subsidiaries, an associate, joint ventures and other related parties which the Group/Company had significant transactions with during the year were as follows:

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Resources Limited	Thailand	✓	-	-	-	✓	-
Indorama Ventures Global Services Limited	Thailand	-	99.99	-	-	✓	-
Indorama Polymers Public Company Limited	Thailand	-	99.92	-	-	✓	-
Indorama Holdings Limited	Thailand	-	99.81	-	-	-	-
Indorama Polyester Industries Public Company Limited	Thailand	-	99.49	-	-	✓	-
Indorama Petrochem Limited	Thailand	-	99.99	-	-	✓	-
TPT Petrochemicals Public Company Limited	Thailand	-	99.97	-	-	✓	-
IVL Belgium N.V.	Belgium	-	-	99.99	-	✓	-
Petform (Thailand) Limited	Thailand	-	-	59.95	-	✓	-
Asia Pet (Thailand) Limited	Thailand	-	-	99.92	-	✓	-
Guangdong IVL PET Polymer Co., Ltd.	China	-	-	99.92	-	-	-
Indorama Ventures Hygiene (Suzhou) Co., Ltd. (Formerly FiberVisions (China) Textile Products Limited)	China	-	-	99.99	-	-	-
Indorama Ventures Mobility (Kaiping) Co., Ltd. (Formerly Performance Fibers (Kaiping) Company Limited)	China	-	-	99.99	-	-	-

Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Ventures Mobility (Kaiping) No.2 Co., Ltd. (Formerly Performance Fibers (Kaiping) No.2 Company Limited)	China	-	-	99.99	-	-	-
Indorama Ventures Mobility (Kaiping) No.3 Co., Ltd. (Formerly Performance Fibers (Kaiping) No.3 Company Limited)	China	-	-	99.99	-	-	-
Indorama Ventures Mobility (Kaiping) Trading Co., Ltd. (Formerly Performance Fibers (Kaiping) Trading Company Limited)	China	-	-	99.99	-	-	-
Indorama Ventures Mobility (Qingdao) Co., Ltd. (Formerly Glanzstoff Industries (Qingdao) Company Limited)	China	-	-	99.99	-	-	-
Indorama Ventures Lifestyle (Shanghai) Co., Ltd. (Formerly Sinterama Trading (Shanghai) Co., Ltd.)	China	-	-	99.99	-	-	-
Sinterama Yarns (Dongguan) Co., Ltd.	China	-	-	99.99	-	-	-
Hubei Gold Dragon Nonwoven Fabrics Co., Ltd.	China	-	-	65.31	-	-	-
Oxiteno (Shanghai) Ltd.	China	-	-	99.99	-	-	-

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Indorama Ventures (Hong Kong) Holding Limited (Formerly Glanzstoff Holding (Hong Kong) Limited)	Hong Kong - China	-	-	99.99	-	-	-
Indorama Ventures Mobility (Hong Kong) Trading Limited (Formerly Performance Fibers (Hong Kong) Limited)	Hong Kong - China	-	-	99.99	-	-	-
Sinterama Asia Limited	Hong Kong - China	-	-	99.99	-	-	-
Tollegno Far East Co. Limited	Hong Kong - China	-	-	99.99	-	-	-
PT. Indorama Ventures Indonesia	Indonesia	-	-	99.99	-	-	-
PT. Indorama Polyester Industries Indonesia	Indonesia	-	-	99.96	-	✓	-
PT. Indorama Polychem Indonesia	Indonesia	-	-	99.99	-	-	-
PT. Indorama Polypet Indonesia	Indonesia	-	-	99.99	-	-	-
PT. Indorama Petrochemicals	Indonesia	-	-	99.99	-	-	-
PT. Indorama Ventures Sustainable Solutions Indonesia	Indonesia	-	-	99.99	-	-	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
KP Equity Partners Inc. (Completion of dissolution process in 2023)	Malaysia	-	-	99.99	-	-	-
Indorama Ventures Packaging (Myanmar) Limited	Myanmar	-	-	99.99	-	-	-
Indorama Ventures Packaging (Philippines) Corporation	Philippines	-	-	99.99	-	-	-
PETVALUE PHILIPPINES CORPORATION	Philippines	-	-	70.00	-	-	-
Indorama Ventures Investments & Holdings Pte. Ltd.	Singapore	-	-	99.92	-	✓	-
Indorama Ventures Oxides Ankleshwar Private Limited	India	-	-	99.99	-	-	-
Indorama Ventures Global Shared Services Private Limited	India	-	-	99.99	-	✓	-
Avgol India Private Limited	India	-	-	65.97	-	-	-
Avgol Nonwovens India Private Limited	India	-	-	65.97	-	-	-
IVL Dhunseri Petrochem Industries Private Limited	India	-	-	50.00	-	✓	-
Indo Rama Synthetics (India) Limited	India	-	-	38.56	-	✓	✓
Indorama Yarns Private Limited	India	-	-	38.56	-	-	-
Indorama Ventures Yarns Private Limited	India	-	-	38.56	-	-	-

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Indorama Ventures Denmark Holdings A/S (Formerly FiberVisions (China) A/S)	Denmark	-	-	99.99	-	-	-
Indorama Ventures Hygiene Denmark A/S (Formerly FiberVisions A/S)	Denmark	-	-	99.99	-	-	-
Wellman France Recyclage S.A.S.	France	-	-	99.99	-	-	-
Indorama Ventures Mobility Longlaville S.A.S. (Formerly Glanzstoff Longlaville S.A.S.)	France	-	-	99.99	-	-	-
Indorama Ventures Mobility Longlaville Services S.A.S. (Formerly Glanzstoff Services S.A.S.)	France	-	-	99.99	-	-	-
Indorama Ventures Recycling Verdun S.A.S.	France	-	-	99.99	-	-	-
Wellman Neufchateau Recyclage S.A.	France	-	-	99.99	-	✓	-
FiberVisions Vermogensver-waltungsgesellschaft mbH	Germany	-	-	99.99	-	-	-
Indorama Germany GmbH	Germany	-	-	99.99	-	-	-
Indorama Ventures Fibers Germany GmbH (Formerly Trevira GmbH)	Germany	-	-	99.99	-	-	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Ventures Mobility Obernburg GmbH (Formerly PHP Fibers GmbH)	Germany	-	-	80.00	-	-	-
Indorama Ventures Krumbach Holding GmbH (Formerly UTT Beteiligungsgesellschaft mbH)	Germany	-	-	80.00	-	-	-
Indorama Ventures Mobility Krumbach GmbH & Co. KG (Formerly UTT Technische Textilien GmbH & Co. KG)	Germany	-	-	80.00	-	-	-
Indorama Ventures Mobility Services GmbH (Formerly UTT Admin GmbH)	Germany	-	-	80.00	-	-	-
Indorama Ventures Polymers Germany GmbH	Germany	-	-	99.99	-	-	-
Wellman International Limited	Ireland	-	-	99.99	-	-	-
Indorama Ventures Cremona Holding S.r.l. (Formerly Glanzstoff Industries S.R.L.)	Italy	-	-	99.99	-	-	-
Indorama Ventures Mobility Cremona s.p.a. (Formerly Società Industriale Cremonese SICREM s.p.a.)	Italy	-	-	99.99	-	-	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Ventures Lifestyle Italy S.p.A. (Formerly Sinterama S.p.A)	Italy	-	-	99.99	-	-	-
Indorama Ventures Services S.r.l.	Italy	-	-	99.99	-	✓	-
Filatura Tollegno 1900 S.r.l.	Italy	-	-	99.99	-	-	-
Indorama Ventures Luxembourg Holding S.A. (Formerly Glanzstoff Industries S.A.)	Luxembourg	-	-	99.99	-	-	-
Indorama Ventures Mobility Luxembourg S.A. (Formerly Textilcord Steinfort S.A.)	Luxembourg	-	-	99.99	-	-	-
Glanzstoff Management GmbH	Austria	-	-	99.99	-	-	-
Schoeller GmbH & Co KG	Austria	-	-	99.99	-	-	-
Indorama Austria GmbH	Austria	-	-	99.99	-	-	-
AE BG AlphaOmega Holding GmbH	Austria	-	-	99.99	-	-	-
Indorama Ventures Mobility Bohemia s.r.o. (Formerly Glanzstoff - Bohemia s.r.o.)	Czech Republic	-	-	99.99	-	-	-
Indorama Ventures Mobility Moravia a.s. (Formerly KORDÁRNA Plus a.s.)	Czech Republic	-	-	99.99	-	-	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Ventures Mobility Moravia Services s.r.o. (Formerly Kordplast s.r.o.)	Czech Republic	-	-	99.99	-	-	-
Schoeller Kresice s.r.o.	Czech Republic	-	-	99.99	-	-	-
UCY Polymers CZ s.r.o.	Czech Republic	-	-	85.00	-	-	-
UAB Orion Global PET	Lithuania	-	-	99.92	-	✓	-
UAB Indorama Polymers Europe	Lithuania	-	-	99.92	-	✓	-
UAB Indorama Holdings Europe	Lithuania	-	-	99.99	-	✓	-
Indorama Netherlands B.V.	The Netherlands	-	-	99.99	-	-	-
Indorama Ventures Europe B.V.	The Netherlands	-	-	99.99	-	✓	-
Indorama Ventures Recycling Netherlands B.V.	The Netherlands	-	-	99.99	-	-	-
MJR Recycling B.V.	The Netherlands	-	-	99.99	-	-	-
Indorama Ventures Dutch Investments B.V.	The Netherlands	-	-	50.78	-	-	-
Indorama Ventures Netherlands Oxides B.V.	The Netherlands	-	-	99.99	-	-	-
Oxiteno Netherlands B.V.	The Netherlands	-	-	99.99	-	-	-
Indorama Ventures Poland Sp. z o.o.	Poland	-	-	99.99	-	✓	-
Indorama Ventures Recycling Poland Sp. z o.o.	Poland	-	-	99.99	-	✓	-
Tollegno 1900 Poland Sp. z o.o.	Poland	-	-	99.99	-	-	-
Indorama Ventures Química S.L.U.	Spain	-	-	99.99	-	-	-

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Indorama Ventures Spain S.L.	Spain	-	-	99.99	-	-	-
Indorama Trading AG	Switzerland	-	-	99.81	-	-	-
Indorama Ventures Adana PET Sanayi Anonim Sirketi	Turkey	-	-	99.99	-	✓	-
Indorama Ventures Corlu PET Sanayi Anonim Sirketi	Turkey	-	-	99.99	-	✓	-
Beverage Plastics (Holdings) Limited	United Kingdom	-	-	99.86	-	-	-
Beverage Plastics Limited	United Kingdom	-	-	99.86	-	-	-
Beacon Trading (UK) Limited	United Kingdom	-	-	99.81	-	-	-
Indorama Trading (UK) Ltd.	United Kingdom	-	-	99.81	-	-	-
Indorama Polymers Workington Limited	United Kingdom	-	-	99.92	-	✓	-
Autofil Yarns Limited	United Kingdom	-	-	99.99	-	-	-
Indorama Ventures Portugal PTA - Unipessoal, LDA. (Merged with Indorama Ventures Portugal Utility - Unipessoal, LDA. and Indorama Ventures Portugal PTA - Unipessoal, LDA. is a surviving entity.)	Portugal	-	-	99.99	-	-	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Ventures Portugal Utility - Unipessoal, LDA. (Merged with Indorama Ventures Portugal PTA - Unipessoal, LDA. and Indorama Ventures Portugal PTA - Unipessoal, LDA. is a surviving entity.)	Portugal	-	-	-	-	-	-
Avgol Cyprus Ltd.	Cyprus	-	-	65.97	-	-	-
"Avgol" Limited Liability Company	Russia	-	-	65.97	-	-	-
Indorama Ventures Holdings Corporation	USA	-	-	99.99	-	✓	-
Indorama Ventures USA Holdings LP	USA	-	-	99.99	-	-	-
Indorama Ventures OGL Holdings LP	USA	-	-	99.99	-	-	-
Indorama Ventures Logistics LLC	USA	-	-	99.99	-	✓	-
Indorama Ventures (Oxide & Glycols) LLC	USA	-	-	99.99	-	✓	-
Indorama Ventures Asia Holdings Finance, Inc. (Formerly Performance Fibers Holdings Finance, Inc.)	USA	-	-	99.99	-	-	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Ventures Asia Holdings, LLC (Formerly Performance Fibers Asia Holdings, LLC)	USA	-	-	99.99	-	-	-
Indorama Ventures Asia, LLC (Formerly Performance Fibers Asia, LLC)	USA	-	-	99.99	-	-	-
Indorama Ventures AlphaPet Holdings, Inc.	USA	-	-	99.99	-	✓	-
Indorama Polymers (USA) LLC	USA	-	-	99.99	-	-	-
AlphaPet, Inc.	USA	-	-	99.99	-	✓	-
Indorama Ventures Polyholding LLC	USA	-	-	99.99	-	-	-
Indorama Ventures USA LLC	USA	-	-	99.99	-	-	-
Auriga Polymers Inc.	USA	-	-	99.99	-	✓	-
StarPet Inc.	USA	-	-	99.99	-	✓	-
Indorama Ventures Xylenes & PTA LLC	USA	-	-	99.99	-	✓	-
Indorama Ventures Performance Fibers Holdings USA LLC	USA	-	-	99.99	-	-	-
Indorama Ventures Hygiene Covington Inc. (Formerly FiberVisions Manufacturing Company)	USA	-	-	99.99	-	-	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Ventures Hygiene Fibers Inc. (Formerly FiberVisions Corporation)	USA	-	-	99.99	-	-	-
Indorama Ventures Hygiene Athens Inc. (Formerly FiberVisions Products, Inc.)	USA	-	-	99.99	-	-	-
FiberVisions L.P.	USA	-	-	99.99	-	-	-
Indorama Ventures Mobility Scottsboro Inc. (Formerly PHP Fibers Inc.)	USA	-	-	80.00	-	-	-
Indorama Ventures Mobility Scottsboro SafeTweave, Inc. (Formerly Safe Tweave Inc.)	USA	-	-	80.00	-	-	-
Indorama Ventures Olefins Holding LLC	USA	-	-	99.99	-	-	-
Indorama Ventures Investments USA LLC	USA	-	-	50.78	-	-	-
Indorama Ventures Olefins LLC	USA	-	-	90.35	-	✓	-
Indorama Ventures Exporter Inc.	USA	-	-	99.99	-	✓	-
Indorama Ventures Mobility Winnsboro LLC (Formerly Winnsboro Fibres LLC)	USA	-	-	99.99	-	-	-
Indorama Ventures Corpus Christi Holding LLC	USA	-	-	99.99	-	✓	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Avgol America Inc.	USA	-	-	65.97	-	-	-
Avgol Distribution Company Inc.	USA	-	-	65.97	-	-	-
Indorama Ventures Insurance Company USA	USA	-	-	99.99	-	-	-
Indorama Ventures Sustainable Solutions LLC	USA	-	-	99.99	-	✓	-
Indorama Ventures Oxides LLC	USA	-	-	99.99	-	✓	-
Indorama Ventures Sustainable Solutions Fontana, Inc.	USA	-	-	99.99	-	✓	-
Indorama Ventures Propylene Oxides LLC	USA	-	-	99.99	-	✓	-
Indorama Ventures Oxides International LLC	USA	-	-	99.99	-	✓	-
Indorama Ventures Sustainable Recycling, LLC	USA	-	-	99.99	-	✓	-
Oxiteno USA LLC	USA	-	-	99.99	-	✓	-
Tollegno 1900 U.S.A., Inc.	USA	-	-	99.99	-	-	-
Indorama Ventures Northern Investments Inc.	Canada	-	-	99.99	-	✓	-
Indorama Ventures Gestion Inc.	Canada	-	-	99.99	-	✓	-
Indorama Ventures PTA Montréal LP	Canada	-	-	99.99	-	-	-
4200144 Canada Inc.	Canada	-	-	99.99	-	-	-
IVL Holding S. de R.L. de C.V.	Mexico	-	-	99.99	-	✓	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Ventures EcoMex, S. de R.L. de C.V.	Mexico	-	-	99.99	-	✓	-
Indorama Ventures Polymers Mexico, S. de R.L. de C.V.	Mexico	-	-	99.99	-	✓	-
Indorama Ventures Polycom, S. de R.L. de C.V.	Mexico	-	-	99.99	-	✓	-
Performance Fibers Operations Mexico, S. de R.L. de C.V.	Mexico	-	-	99.99	-	-	-
Indorama Ventures Mobility Querétaro, S. de R.L de C.V. (Formerly Glanzstoff Industries Mexico, S. de R.L. de C.V.)	Mexico	-	-	99.99	-	-	-
Indorama Ventures Mobility Puebla, S.A. de C.V. (Formerly UTT de México Technical Textiles, S.A. de C.V.)	Mexico	-	-	80.00	-	-	-
Oxiteno México, S.A. de C.V.	Mexico	-	-	99.99	-	-	-
Indorama Ventures Polimeros S.A.	Brazil	-	-	99.99	-	✓	-
Oxiteno S.A. Indústria e Comércio (Merged with Tereftalicos Industria e Participacoes Ltda. and Oxiteno S.A. Indústria e Comércio is a surviving entity.)	Brazil	-	-	99.99	-	✓	-

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Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Tereftalicos Industria e Participacoes Ltda. (Merged with Oxiteno S.A. Indústria e Comércio and Oxiteno S.A. Indústria e Comércio is a surviving entity.)	Brazil	-	-	-	-	-	-
Tereftálicos Indústrias Químicas Ltda.	Brazil	-	-	99.99	-	-	-
Indorama Ventures Fibras Brasil Ltda.	Brazil	-	-	99.99	-	-	-
Indorama Ventures Soluções Sustentáveis Brasil Ltda.	Brazil	-	-	99.99	-	-	-
Indorama Ventures Lifestyle Brazil Ltda. (Formerly Sinterama do Brasil Ltda.)	Brazil	-	-	99.99	-	-	-
Indorama Ventures Brazil Oxides Ltda.	Brazil	-	-	99.99	-	-	-
Oleoquímica Indústria e Comércio de Produtos Químicos Ltda.	Brazil	-	-	99.99	-	-	-
Empresa Carioca de Produtos Químicos S.A.	Brazil	-	-	99.99	-	-	-
Indorama Ventures Lifestyle Bulgaria EOOD (Formerly Sinterama Bulgaria EOOD)	Republic of Bulgaria	-	-	99.99	-	-	-

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Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama PET (Nigeria) Limited	Nigeria	-	-	89.92	-	-	-
Bevpak (Nigeria) Limited	Nigeria	-	-	99.99	-	-	-
Indorama Ventures Packaging (Ghana) Limited Company (Formerly Indorama Ventures Packaging (Ghana) Limited)	Republic of Ghana	-	-	99.99	-	-	-
IVL Dhunseri Polyester Company S.A.E.	Egypt	-	-	50.00	-	✓	-
Medco Plast Co. for Packing & Packaging systems (S.A.E.)	Egypt	-	-	99.99	-	-	-
Avgol Industries 1953 Ltd.	Israel	-	-	65.97	-	✓	-
Indorama Ventures Holdings Pty Ltd.	Australia	-	-	99.99	-	-	-
Indorama Ventures Oxides Australia Pty Limited	Australia	-	-	99.99	-	✓	-
Indorama Ventures Captive Insurance Co., Ltd.	Bermuda	-	-	99.99	-	-	-
Oxiteno Colombia S.A.S.	Colombia	-	-	99.99	-	-	-
Oxiteno Uruguay S.A.	Uruguay	-	-	99.99	-	-	-
Oxiteno Argentina S.R.L.	Argentina	-	-	99.99	-	-	-
Oxiteno Europe B.V.	Belgium	-	-	99.99	-	-	-
Ngoc Nghia Industry - Service - Trading Joint Stock Company	Vietnam	-	-	97.81	-	-	-
Tollegno Japan Limited	Japan	-	-	99.99	-	-	-

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Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
ES Indorama Ventures Rayong Company Limited (Formerly ES FiberVisions (Thailand) Co., Ltd.)	Thailand	-	-	-	49.91	-	-
Toyobo Indorama Advanced Fibers Company Limited	Thailand	-	-	-	49.75	-	-
ES Indorama Ventures (Suzhou) Co., Ltd. (Formerly ES FiberVisions (Suzhou) Co., Ltd.)	China	-	-	-	50.00	-	-
ES FiberVisions Shanghai Co., Ltd.	China	-	-	-	50.00	-	-
Shenma-PHP (Pingdingshan) Air Bag Yarn Manufacturing Co., Ltd.	China	-	-	-	39.20	-	-
PHP-Shenma Air Bag Yarn Marketing (Shanghai) Co., Ltd.	China	-	-	-	40.80	-	-
ES FiberVisions Hong Kong Limited	Hong Kong - China	-	-	-	50.00	-	-
ES FiberVisions Company Limited	Japan	-	-	-	50.00	-	-
ES FiberVisions Holdings ApS	Denmark	-	-	-	50.00	-	-
ES Indorama Ventures Denmark ApS (Formerly ES FiberVisions ApS)	Denmark	-	-	-	50.00	-	-
TTI GmbH	Germany	-	-	-	40.00	-	-

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Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
ES Indorama Ventures L.P. (Formerly ES FiberVisions LP)	USA	-	-	-	50.00	-	-
ES Indorama Ventures Inc. (Formerly ES FiberVisions, Inc.)	USA	-	-	-	50.00	-	-
Huvis Indorama Advanced Materials, LLC	USA	-	-	-	50.00	✓	-
Indorama Loop Technologies, LLC	USA	-	-	-	50.00	✓	-
Oxicap Indústria de Gases Ltda.	Brazil	-	-	-	15.09	-	-
IDVB Recycling Operations Private Limited	India	-	-	-	25.00	-	-
Thai Plaspac Public Company Limited	Thailand	-	-	-	-	-	✓
Lohia Global Holdings Limited	Hong Kong - China	-	-	-	-	-	✓
Vega Aviation Limited	British Virgin Islands	-	-	-	-	✓	✓
PT. Indo-Rama Synthetics Tbk.	Indonesia	-	-	-	-	✓	-
PT. TIGADAYA MINERGY	Indonesia	-	-	-	-	-	✓
Indorama Eleme Petrochemicals Limited	Nigeria	-	-	-	-	✓	✓
Indorama Industries Limited	India	-	-	-	-	-	✓
Sun Packaging Systems (FZC)	United Arab Emirates	-	-	-	-	-	✓
Aurus Speciality Limited	Thailand	-	-	-	-	✓	✓

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

Name of entities	Country of incorporation/ Nationality	Immediate parent company	Subsidiary (% of effective interest)	Indirect subsidiary (% of effective interest)	Indirect associate and joint venture (% of effective interest)	Common Director/Key management personnel	Family relationships
Indorama Sustainable Polymers (India) Private Limited	India	-	-	38.56	-	-	-
Indorama Sustainable Polyester Yarns Private Limited	India	-	-	38.56	-	-	-
Indorama Ventures Israel Ltd.	Israel	-	-	99.99	-	-	-

Name of entities	Country of incorporation/ Nationality	Nature of relationships
IVL Foundation	Thailand	Common Director/Family relationships with board of directors
Key management personnel	Various countries	Persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of the Group/Company

Significant transactions with related parties	Consolidated financial statements		Separate financial statements	
Year ended 31 December	2023	2022	2023	2022
	(in thousand Baht)			
Subsidiaries				
Finance income	-	-	3,909,912	3,862,733
Royalty income	-	-	1,587,767	1,815,555
Other income	-	-	263,178	334,534
Dividend income	-	-	7,963,195	10,934,704
Administrative expenses	-	-	1,059,832	1,223,113
Finance costs	-	-	301,904	216,037
Joint ventures				
Revenue from sales of goods	7,551,295	8,295,547	-	-
Finance income	86,329	15,726	-	-
Other income	42,216	158,295	252	-
Associate				
Purchases of goods and raw materials	127,729	93,615	-	-
Key management personnel				
Short-term employee benefits including directors' fee and bonus	564,849	473,937	33,140	30,880
Long-term employee benefits	9,568	4,924	-	-
Other related parties				
Revenue from sales of goods	3,074,182	3,626,388	-	-
Purchases of goods and raw materials	363,360	757,987	-	-
Purchases of property, plant and equipment	6,822	106,080	-	-
Distribution costs and administrative expenses	79,322	74,650	-	-
Royalty expense	256,700	272,503	256,700	272,503

Significant balances with related parties *At 31 December*	Consolidated financial statements 2023	2022	Separate financial statements 2023	2022
		(in thousand Baht)		
Trade accounts receivable				
Joint ventures	1,983,752	2,202,980	-	-
Associate	2,993	2,931	-	-
Other related parties	329,376	183,919	-	-
	2,316,121	**2,389,830**	**-**	**-**
Less allowance for expected credit loss	-	-	-	-
Net	**2,316,121**	**2,389,830**	**-**	**-**
Other receivables				
Subsidiaries	-	-	1,082,424	719,028
Joint ventures	107,877	134,347	60	-
Other related parties	61,150	76,364	-	-
	169,027	**210,711**	**1,082,484**	**719,028**
Less allowance for expected credit loss	-	-	-	-
Net	**169,027**	**210,711**	**1,082,484**	**719,028**
Other non-current assets				
Joint ventures	354,289	378,646	-	-
	354,289	**378,646**	**-**	**-**
Less allowance for expected credit loss	-	-	-	-
Net	**354,289**	**378,646**	**-**	**-**
Short-term loans to				
Subsidiaries	-	-	29,907,465	6,305,014
Joint ventures	112,820	22,096	-	-
	112,820	**22,096**	**29,907,465**	**6,305,014**
Less allowance for expected credit loss	-	-	-	-
Net	**112,820**	**22,096**	**29,907,465**	**6,305,014**
Long-term loans to				
Subsidiaries	-	-	92,959,325	106,123,587
Joint ventures	342,233	-	-	-
	342,233	-	**92,959,325**	**106,123,587**
Less allowance for expected credit loss	-	-	-	-
Net	**342,233**	-	**92,959,325**	**106,123,587**
Interest receivable				
Subsidiaries	-	-	336,559	508,113
Joint ventures	2,853	1,598	-	-
Total	**2,853**	**1,598**	**336,559**	**508,113**
Trade accounts payable				
Joint ventures	6,217	1,878	-	-
Associate	7,605	9,274	-	-
Other related parties	72,541	110,280	-	-
Total	**86,363**	**121,432**	**-**	**-**

Significant balances with related parties *At 31 December*	Consolidated financial statements 2023	2022	Separate financial statements 2023	2022
		(in thousand Baht)		
Other current liabilities				
Subsidiary	-	-	264,523	285,567
Joint ventures	235	1,105	-	-
Other related parties	87,152	59,881	53,390	50,281
Total	**87,387**	**60,986**	**317,913**	**335,848**
Long-term loans from				
Subsidiaries	-	-	12,500,000	8,000,000
Total	**-**	**-**	**12,500,000**	**8,000,000**

Significant agreements with related parties

Loan Agreements

As of 31 December 2023, the Company had long-term loan agreements with certain subsidiaries for the period ranging from 3 to 14 years, bearing interest at the fixed rate.

License Agreements

The Company entered into the license agreements with direct and indirect subsidiaries in respect of the use of the name "Indorama Ventures". Under the agreement, the Company shall receive the royalty fees on a quarterly basis at the agreed amounts based on rate and conditions stipulated in the agreement.

Guarantee Agreements

The Company and a certain indirect subsidiary entered into Guarantee Agreements with its related parties to provide the corporate guarantee to the third parties for the term loans of agreed amount. The agreements expire when the loans have been fully paid by those related parties to third parties.

Lease Agreement

On 31 January 2019, Auriga Polymers Inc. ("Auriga"), an indirect subsidiary of the Company, entered into the Equipment Lease Agreement with its joint venture, Huvis Indorama Advanced Materials, LLC ("Huvis") whereby Auriga rents to Huvis the equipment on the terms and conditions stipulated in the agreement on a non-cancellable period of 15 years. The Group treats aforesaid lease as a finance lease.

6 Cash and cash equivalents

	Consolidated financial statements 2023	2022	Separate financial statements 2023	2022
		(in thousand Baht)		
Cash on hand	44,625	42,918	-	-
Cash at banks	13,697,212	11,737,218	4,285	73,523
Highly liquid short-term investments	4,940,771	9,431,013	-	-
Total	**18,682,608**	**21,211,149**	**4,285**	**73,523**

7 Trade accounts receivable

At 31 December	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
	(in thousand Baht)			
Within credit terms	42,967,255	47,465,815	-	-
Overdue:				
Less than 3 months	6,533,409	6,242,781	-	-
3-6 months	1,510,933	1,412,548	-	-
6-12 months	148,341	574,730	-	-
Over 12 months	765,297	745,955	-	-
Total	**51,925,235**	**56,441,829**	**-**	**-**
Less allowance for expected credit loss	(811,705)	(861,556)	-	-
Net	**51,113,530**	**55,580,273**	**-**	**-**

Allowance for expected credit loss	*Note*	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
		(in thousand Baht)			
At 1 January		861,556	673,230	-	-
Assumes from business acquisition	*4*	-	222,444	-	-
Addition		74,503	136,685	-	-
Reversal		(100,893)	(127,465)	-	-
Write-off		(18,818)	(25,822)	-	-
Effect of movements in exchange rates		(4,643)	(17,516)	-	-
At 31 December		**811,705**	**861,556**	**-**	**-**

Information of credit risk is disclosed in note 31 (b.1.1).

8 Inventories

	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
	(in thousand Baht)			
Finished goods	45,261,627	56,063,028	-	-
Work in progress	4,208,578	3,978,979	-	-
Raw materials	30,690,049	39,743,999	-	-
Trading materials	802,078	849,755	-	-
Spare parts and supplies	11,353,794	11,411,153	-	-
Goods in transit	6,749,914	7,032,816	-	-
	99,066,040	119,079,730	-	-
Less allowance for decline in value	(2,409,461)	(3,207,466)	-	-
Net	**96,656,579**	**115,872,264**	**-**	**-**
Inventories recognized in 'cost of sales of goods':				
- Cost	476,141,698	542,222,795	-	-
- Provision for (reversal of) losses on inventories devaluation, net	(102,408)	2,098,472	-	-
Net	**476,039,290**	**544,321,267**	**-**	**-**

9 Other current assets

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Value added tax receivable	8,423,786	8,517,655	146,529	86,641
Advance tax payments and withholding tax	4,024,601	4,053,177	70,320	48,296
Advance payments	2,602,620	2,586,828	19,281	22,471
Prepaid expenses	1,745,252	1,636,259	-	-
Export incentive receivable	619,125	546,371	-	-
Insurance claims receivable	582,819	53,086	-	-
Material price adjustment receivable	25,344	105,799	-	-
Others	1,369,626	967,494	-	-
Total	**19,393,173**	**18,466,669**	**236,130**	**157,408**

10 Investments in subsidiaries

	Separate financial statements	
	2023	2022
	(in thousand Baht)	
Cost		
At 1 January	**66,709,169**	**66,709,169**
Sale of investment in a subsidiary	(129,799)	-
At 31 December	**66,579,370**	**66,709,169**
Impairment loss		
At 1 January	**(5,303,819)**	**(121,630)**
Impairment loss	-	(5,182,189)
Sale of investment in a subsidiary	121,630	-
At 31 December	**(5,182,189)**	**(5,303,819)**
Net book value		
At 31 December	**61,397,181**	**61,405,350**

During the year 2022, the actual financial performance of one of direct subsidiary was significantly lower than the management's expectations. The management believes that the impairment indications existed. Therefore, the Company assessed the equity value of this certain investment in subsidiary. Based on the result of the assessment, the Company recorded an impairment loss amounting to Baht 5,182.2 million in the separate statement of income for the year ended 31 December 2022.

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

11 Investments in associate and joint ventures

		Consolidated financial statements															
	Type of business	Effective ownership interest		Paid-up capital		Cost method		At equity method		Effect of movements in exchange rates		Carrying value at equity method		Dividend income		Share of profit (losses) of associate and joint ventures for the year	
		2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
		(%)								(in thousand Baht)							
Associate																	
Oxicap Indústria de Gases Ltda.	Utility service	15.09	15.09	529,563	529,563	114,792	114,792	109,921	116,028	7,297	(7,763)	117,218	108,265	-	-	1,656	1,236
Total						**114,792**	**114,792**	**109,921**	**116,028**	**7,297**	**(7,763)**	**117,218**	**108,265**	-	-	**1,656**	**1,236**
Joint ventures																	
ES FiberVisions	Marketing and sales of fiber	50.00	50.00	613,653	613,653	699,178	699,178	1,505,347	1,450,182	(7,305)	23,330	1,498,042	1,473,512	(11,903)	(19,953)	43,738	74,766
ES Indorama Ventures (Suzhou) Co., Ltd.	Manufacture and sale of bicomponent fibers	50.00	50.00	786,545	786,545	392,992	392,992	403,727	465,583	(10,864)	(25,510)	392,863	440,073	-	-	(36,346)	(48,553)
Shenma-PHP (Pingdingshan) Air Bag Yarn Manufacturing Co., Ltd.	Manufacture and internal sale of air bag yarns	39.20	39.20	796,144	796,144	191,864	191,864	317,290	247,292	(8,653)	(16,988)	308,637	230,304	-	-	86,986	23,843
PHP-Shenma Air Bag Yarn Marketing (Shanghai) Co., Ltd.	Marketing and sale of air bag yarns	40.80	40.80	9,038	9,038	152,611	152,611	228,977	211,329	(21)	(7,536)	228,956	203,793	-	-	25,184	14,290
TTI GmbH	Research and development service	40.00	40.00	1,119	1,119	12,852	12,852	3,145	3,240	103	(95)	3,248	3,145	-	-	-	-
ES Indorama Ventures Rayong Company Limited	Manufacture of polyester fibers and yarns	49.91	49.91	415,000	410,000	207,500	205,000	430,865	408,479	-	-	430,865	408,479	(2,500)	-	22,386	30,766

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

		Consolidated financial statements															
	Type of business	Effective ownership interest		Paid-up capital		Cost method		At equity method		Effect of movements in exchange rates		Carrying value at equity method		Dividend income		Share of profit (losses) of associate and joint ventures for the year	
		2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
		(%)								(in thousand Baht)							
Joint ventures																	
Huvis Indorama Advanced Materials, LLC	Manufacture of Fibers	50.00	50.00	1,225,187	1,142,432	587,858	546,480	313,133	386,639	(2,060)	13,054	311,073	399,693	-	-	(127,938)	(129,348)
Indorama Loop Technologies, LLC	Manufacture of PET and Polyester Recycling fibers	50.00	50.00	96,066	96,066	48,033	48,033	51,843	50,129	(507)	1,714	51,336	51,843	-	-	-	-
Toyobo Indorama Advanced Fibers Company Limited	Manufacture of High Tenacity Nylon Filament Yarn for air bag and related service	49.75	49.75	786,062	786,062	393,031	393,031	403,864	409,946	-	-	403,864	409,946	-	-	(6,082)	10,239
IDVB Recycling Operations Private Limited	Manufacture of Pet Resin	50.00	-	110,713	-	55,330	-	54,029	-	(1,314)	-	52,715	-	-	-	(1,301)	-
Total						**2,741,249**	**2,642,041**	**3,712,220**	**3,632,819**	**(30,621)**	**(12,031)**	**3,681,599**	**3,620,788**	**(14,403)**	**(19,953)**	**6,627**	**(23,997)**
Grand total						**2,856,041**	**2,756,833**	**3,822,141**	**3,748,847**	**(23,324)**	**(19,794)**	**3,798,817**	**3,729,053**	**(14,403)**	**(19,953)**	**8,283**	**(22,761)**

None of the Group's associate and joint ventures are publicly listed and consequently do not have published price quotations.

Material joint venture

The following table summarizes the financial information of the material joint venture as included in their own financial statements, adjusted for fair value adjustments at acquisition and differences in accounting policies. The table also reconciles the summarized financial information to the carrying amount of the Group's interest in these companies.

	ES FiberVisions	
	2023	2022
	(in thousand Baht)	
Revenue	9,382,952	11,073,787
Profit from operations (a)	87,476	149,532
Other comprehensive income	-	-
Total comprehensive income (100%)	87,476	149,532
Group's share of total comprehensive income	**43,738**	**74,766**
Dividend income from joint ventures for the year	11,903	19,953
Current assets (b)	2,994,160	2,844,645
Non-current assets	1,549,748	1,472,254
Current liabilities	1,291,132	1,250,688
Non-current liabilities	125,683	117,098
Net assets (100%)	3,127,093	2,949,113
Carrying amount of interest in joint ventures	**1,498,042**	**1,473,512**
Remark:		
a. Includes:		
- finance costs	1,190	1,371
- tax expense	19,188	35,784
b. Includes cash and cash equivalents	634,521	560,757

ES FiberVisions group consists of ES Indorama Ventures L.P., ES Indorama Ventures Inc., ES FiberVisions Holdings ApS, ES Indorama Ventures Denmark ApS, ES FiberVisions Hong Kong Limited, ES FiberVisions Shanghai Co., Ltd. and ES FiberVisions Company Limited.

Immaterial associate and joint ventures

The following table is summarized financial information for the Group's interest in immaterial associate and joint ventures based on the amounts reported in the Group's consolidated financial statements:

	Immaterial associate and joint ventures	
	2023	2022
	(in thousand Baht)	
Carrying amount of interests in immaterial associate and joint ventures	**2,300,775**	**2,255,541**
Group's share of:		
- Loss from operations, net	(35,455)	(97,527)
- Total comprehensive expense	**(35,455)**	**(97,527)**

12 Investment in joint operation

The Company, through its indirect subsidiary, Indorama Ventures Holdings LP, formed an equal joint operation, namely Corpus Christi Polymers LLC ("CCP"), with Alpek, S.A.B. de C.V. ("Alpek"), and Far Eastern Investment (Holding) Ltd. ("Far Eastern") and has entered into an asset purchase agreement with M&G USA Corp. and its affiliated debtors ("M&G") on 28 March 2018 to acquire the integrated PTA-PET plant currently under construction in Corpus Christi, Texas (the "Corpus Christi Project"), along with certain M&G intellectual property, and utility assets. The acquisition has been completed on 28 December 2018. The consideration for investment in CCP by the Company amounted to USD 382.5 million (Baht 12,043.8 million) out of which USD 6.7 million (Baht 228.2 million) is payable as of 31 December 2023. The payment of consideration payable is subject to the conditions shall have been satisfied according to the Asset Purchase Agreement.

Although CCP is legally separated from the Company, Alpek and Far Eastern (collectively referred as "the Members"), the Group has classified it as a joint operation. This is on the basis that the Members will each receive one-third of the capacity of PTA and PET produced. Each of the Members will procure raw materials independently, while also independently selling and distributing their corresponding PTA and PET. The funding to settle the liabilities is provided by the Members.

As of 31 December 2023, the management believes that the impairment indicators existed in CCP, which was partially constructed and currently paused temporarily. The pause in construction is expected to delay revenue and cashflow streams. The Group assessed value in use of CCP based on estimated future cash flows and pre-tax discount rate of 12.2%, which was lower than its carrying amount. Consequently, the Group recognized an impairment loss on property, plant and equipment which is in the combined PET segment, amounting to Baht 10,724.2 million in the consolidated statement of income for the year ended 31 December 2023.

13 Non-controlling interests

The following table summaries the information relating to each of the Group's subsidiaries that has a material non-controlling interest, before any intra-group eliminations:

	31 December 2023						
	Indorama Ventures Mobility Obernburg GmbH and its subsidiaries	Petform (Thailand) Limited	Indo Rama Synthetics (India) Limited	Avgol Industries 1953 Ltd.	IVL Dhunseri Petrochem Industries Private Limited	IVL Dhunseri Polyester Company S.A.E.	**Total**
				(in thousand Baht)			
Non-controlling interest percentage	20.00	40.05	61.44	34.03	50.00	50.00	
Current assets	3,826,085	1,566,656	5,169,787	4,227,570	4,323,997	8,639,795	
Non-current assets	9,710,302	1,513,623	7,661,129	14,969,130	5,790,598	4,709,036	
Current liabilities	5,146,475	220,836	8,122,338	3,900,340	3,034,324	4,353,069	
Non-current liabilities	4,289,452	87,691	2,205,487	5,266,380	921,783	-	
Net assets	**4,100,460**	**2,771,752**	**2,503,091**	**10,029,980**	**6,158,488**	**8,995,762**	
Carrying amount of non-controlling interest	**352,631**	**1,108,753**	**1,435,883**	**3,481,208**	**2,925,459**	**4,539,360**	**13,843,294**
Other individually immaterial non-controlling interest of the Group's subsidiaries							(137,667)
Total							**13,705,627**
Revenue	12,460,143	4,000,366	15,644,624	11,071,721	22,498,725	20,406,820	
Profit (loss)	(119,134)	433,403	(763,646)	(137,485)	133,812	1,015,003	
Other comprehensive income (expense)	(100,879)	(628)	4,108	(3,377)	(1,181)	-	
Total comprehensive income (expense)	**(220,013)**	**432,775**	**(759,538)**	**(140,862)**	**132,631**	**1,015,003**	
Profit (loss) allocated to non-controlling interest	(23,827)	173,361	(469,184)	(46,694)	66,906	507,500	**208,062**
Other individually immaterial non-controlling interest of the Group's subsidiaries							(323,464)
Total							**(115,402)**
Dividends to non-controlling interest	-	(72,000)	-	-	(341,445)	(209,418)	
Other comprehensive income (expense) allocated to non-controlling interest	16,451	(251)	(22,368)	(245,154)	(59,586)	(55,866)	**(366,774)**

	31 December 2023						
	Indorama Ventures Mobility Obernburg GmbH and its subsidiaries	Petform (Thailand) Limited	Indo Rama Synthetics (India) Limited	Avgol Industries 1953 Ltd.	IVL Dhunseri Petrochem Industries Private Limited	IVL Dhunseri Polyester Company S.A.E.	**Total**
				(in thousand Baht)			
Other individually immaterial non-controlling interest of the Group's subsidiaries							4,611
Total							**(362,163)**
Cash flows from (used in) operating activities	1,112,809	746,312	(905,525)	289,392	230,513	3,635,842	
Cash flows used in investing activities	(452,590)	(140,389)	(1,412,436)	(1,130,156)	(77,370)	(45,938)	
Cash flows from (used in) financing activities	(767,170)	(190,770)	2,446,932	446,717	(811,871)	(3,550,742)	
Net increase (decrease) in cash and cash equivalents	**(106,951)**	**415,153**	**128,971**	**(394,047)**	**(658,728)**	**39,162**	

	31 December 2022						
	Indorama Ventures Mobility Obernburg GmbH and its subsidiaries	Petform (Thailand) Limited	Indo Rama Synthetics (India) Limited	Avgol Industries 1953 Ltd.	IVL Dhunseri Petrochem Industries Private Limited	IVL Dhunseri Polyester Company S.A.E.	**Total**
				(in thousand Baht)			
Non-controlling interest percentage	20.00	40.05	61.44	34.03	50.00	50.00	
Current assets	4,948,958	1,259,823	4,289,930	4,991,294	5,617,818	9,673,124	
Non-current assets	10,415,678	1,592,732	5,283,717	15,594,337	5,584,350	4,848,423	
Current liabilities	5,659,404	254,398	5,734,334	4,206,396	3,688,164	6,022,845	
Non-current liabilities	4,540,074	79,180	1,620,774	5,602,048	721,731	-	
Net assets	**5,165,158**	**2,518,977**	**2,218,539**	**10,777,187**	**6,792,273**	**8,498,702**	
Carrying amount of non-controlling interest	360,007	1,007,643	1,927,435	3,773,075	3,259,584	4,297,144	**14,624,888**
Other individually immaterial non-controlling interest of the Group's subsidiaries							270,827
Total							**14,895,715**
Revenue	14,068,614	4,530,725	19,185,380	14,967,239	32,295,418	27,692,186	
Profit (loss)	(1,083,027)	453,304	235,459	678,948	1,918,128	4,366,567	
Other comprehensive income (expense)	274,448	1,786	(24,145)	(24,056)	(428)	-	
Total comprehensive income (expense)	**(808,579)**	**455,090**	**211,314**	**654,892**	**1,917,700**	**4,366,567**	

	31 December 2022						
	Indorama Ventures Mobility Obernburg GmbH and its subsidiaries	Petform (Thailand) Limited	Indo Rama Synthetics (India) Limited	Avgol Industries 1953 Ltd.	IVL Dhunseri Petrochem Industries Private Limited	IVL Dhunseri Polyester Company S.A.E.	**Total**
				(in thousand Baht)			
Profit (loss) allocated to non-controlling interest	(216,605)	181,322	144,666	231,856	959,064	2,183,283	**3,483,586**
Other individually immaterial non-controlling interest of the Group's subsidiaries							(159,473)
Total							**3,324,113**
Dividends to non-controlling interest	-	(69,000)	-	-	(468,264)	-	
Other comprehensive income (expense) allocated to non-controlling interest	68,480	714	(209,080)	209,905	(318,230)	59,206	**(189,005)**
Other individually immaterial non-controlling interest of the Group's subsidiaries							936
Total							**(188,069)**
Cash flows from operating activities	405,106	409,102	1,276,949	982,311	2,932,087	1,548,932	
Cash flows used in investing activities	(485,014)	(131,738)	(1,132,068)	(919,947)	(128,710)	(227,079)	
Cash flows from (used in) financing activities	224,395	(188,710)	(229,267)	(74,323)	(1,778,838)	(1,307,938)	
Net increase (decrease) in cash and cash equivalents	**144,487**	**88,654**	**(84,386)**	**(11,959)**	**1,024,539**	**13,915**	

14 Property, plant and equipment

	Note	Consolidated financial statements							
		Land and land improvements	Buildings and building improvements	Machinery and equipment	Office furniture, fixtures and equipment	Transportation equipment	Stores and spares	Construction in progress	Total
		(in thousand Baht)							
Cost									
At 1 January 2022		**14,517,625**	**35,231,926**	**321,773,863**	**3,212,553**	**1,059,105**	**1,586,021**	**32,525,747**	**409,906,840**
Additions		82,625	440,950	2,047,397	135,665	35,557	471,703	22,370,195	25,584,092
Acquisitions through business combinations	*4*	1,675,043	3,944,919	22,192,846	176,065	34,766	56,022	1,095,492	29,175,153
Transfers		35,999	1,326,958	19,727,417	217,852	31,545	(10,692)	(21,329,079)	-
Reclassifications		-	21,036	2,389,701	(702,271)	(36,244)	(310,154)	57,840	1,419,908
Disposals		(8,885)	(86,123)	(646,546)	(36,968)	(44,225)	(50,661)	(117,749)	(991,157)
Effect of movements in exchange rates		20,898	(451,088)	2,553,650	(66,902)	10,218	(20,230)	732,070	2,778,616
At 31 December 2022		**16,323,305**	**40,428,578**	**370,038,328**	**2,935,994**	**1,090,722**	**1,722,009**	**35,334,516**	**467,873,452**
Additions		87,990	138,605	4,131,564	98,922	42,424	615,520	19,813,827	24,928,852
Transfers		31,676	2,355,064	15,630,738	301,864	41,418	22,970	(18,383,730)	-
Reclassifications		816,859	(577,838)	(3,384,912)	311,851	149,765	(111,143)	1,224,246	(1,571,172)
Disposals		(75,242)	(19,860)	(3,561,509)	(34,758)	(43,853)	(1,084)	(39,353)	(3,775,659)
Effect of movements in exchange rates		89,946	524,080	(375,244)	51,369	(14,187)	(21,538)	(206,103)	48,323
At 31 December 2023		**17,274,534**	**42,848,629**	**382,478,965**	**3,665,242**	**1,266,289**	**2,226,734**	**37,743,403**	**487,503,796**

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	Note	Land and land improvements	Buildings and building improvements	Machinery and equipment	Office furniture, fixtures and equipment	Transportation equipment	Stores and spares	Construction in progress	Total
					Consolidated financial statements				
					(in thousand Baht)				
Depreciation and impairment losses									
At 1 January 2022		**(845,779)**	**(10,480,075)**	**(104,109,116)**	**(2,012,909)**	**(418,806)**	**(316,646)**	**(46,572)**	**(118,229,903)**
Depreciation charge for the year		(121,304)	(1,580,298)	(18,224,419)	(411,068)	(53,371)	(67,616)	-	(20,458,076)
Impairment losses		(180,609)	(493,474)	(6,377,737)	(97,692)	(5,354)	(287,542)	(281,428)	(7,723,836)
Reclassifications		(157)	(29,400)	(2,023,641)	626,201	10,568	-	-	(1,416,429)
Disposals		71	62,696	324,861	34,422	34,846	863	-	457,759
Effect of movements in exchange rates		(15,573)	61,860	32,306	22,731	(401)	24,641	1,593	127,157
At 31 December 2022		**(1,163,351)**	**(12,458,691)**	**(130,377,746)**	**(1,838,315)**	**(432,518)**	**(646,300)**	**(326,407)**	**(147,243,328)**
Depreciation charge for the year		(149,379)	(1,679,355)	(19,486,121)	(399,834)	(61,207)	(66,442)	-	(21,842,338)
Impairment losses	*12*	-	-	(2,753)	-	-	-	(10,724,198)	(10,726,951)
Transfers		-	-	7,222	-	-	(7,222)	-	-
Reclassifications		(92,161)	117,337	1,571,201	(198,471)	(118,089)	15,229	55,788	1,350,834
Disposals		-	14,306	3,326,881	30,492	41,161	1,026	-	3,413,866
Effect of movements in exchange rates		2,674	(51,871)	(126,606)	(50,754)	7,661	12,888	142,992	(63,016)
At 31 December 2023		**(1,402,217)**	**(14,058,274)**	**(145,087,922)**	**(2,456,882)**	**(562,992)**	**(690,821)**	**(10,851,825)**	**(175,110,933)**
Net book value									
At 31 December 2022									
Owned assets		**15,159,954**	**27,969,887**	**239,660,582**	**1,097,679**	**658,204**	**1,075,709**	**35,008,109**	**320,630,124**
At 31 December 2023									
Owned assets		**15,872,317**	**28,790,355**	**237,391,043**	**1,208,360**	**703,297**	**1,535,913**	**26,891,578**	**312,392,863**

During the year 2022, the actual financial performances of some subsidiaries were significantly lower than management's expectations. The management believes that the impairment indications existed in an Asian cash generating unit and some of European cash generating units. Therefore, the Group assessed the recoverable amounts of these cash generating units. For the Asian cash generating unit, the Group assessed the recoverable amount by preparing discounted cash flow to determine the value in use and assessed the fair value less costs of disposal, based on the result of the assessment, the Group recorded an impairment loss on property, plant and equipment and intangible assets on the Asian cash-generating unit which is in the Combined PET segment amounting to Baht 4,285.1 million in the consolidated statement of income for the year ended 31 December 2022 based on the recoverable amount derived from the fair value less costs of disposal as it is higher than the value in use. For the certain European cash generating units which are in the Fibers segment, the Group assessed the recoverable amounts by preparing discounted cash flow to determine the value in use by applying the pre-tax discount rate of 8.5-12.0% and growth rate of 2.0%, based on the result of the assessment, the Group recorded an impairment loss on property, plant and equipment, intangible assets and goodwill on the European cash generating units in the Fibers segment amounting to Baht 4,019.6 million in the consolidated statement of income for the year ended 31 December 2022 (see note 17 and 18).

Capitalized borrowing costs relating to the construction of the new plant amounted to Baht 1,026.3 million *(2022: Baht 533.7 million)*, with a capitalization rate of 1.75-9.76% *(2022: 1.25-8.00%)*.

15 Right-of-use assets

	Note	Consolidated financial statements					
		Leasehold land	Buildings and building improvements	Machinery and equipment	Office furniture, fixtures and equipment	Transportation equipment	Total
		(in thousand Baht)					
Cost							
At 1 January 2022		**4,955,712**	**3,685,075**	**3,743,158**	**54,418**	**3,602,964**	**16,041,327**
Additions		293,779	413,900	136,659	300,403	1,747,039	2,891,780
Acquisitions through business combinations	*4*	540,619	524,055	164,818	-	38,662	1,268,154
Remeasurement		(703,763)	(5,996)	115,184	-	(5,214)	(599,789)
Reclassifications		-	(7,888)	(105,235)	568,767	(457,934)	(2,290)
Disposals		(371)	(214,948)	(9,528)	(29,078)	(86,024)	(339,949)
Effect of movements in exchange rates		(122,732)	(41,076)	94,145	(11,708)	82,293	922
At 31 December 2022		**4,963,244**	**4,353,122**	**4,139,201**	**882,802**	**4,921,786**	**19,260,155**
Additions		236,002	1,119,115	2,646,606	29,732	1,747,847	5,779,302
Remeasurement		1,397	176,924	(276,233)	-	84,276	(13,636)
Reclassifications		23,973	(23,973)	109,217	(837,258)	664,737	(63,304)
Disposals		(3,334)	(31,402)	(180,651)	(1,305)	(82,093)	(298,785)
Effect of movements in exchange rates		(33,944)	32,521	10,696	5,961	(59,661)	(44,427)
At 31 December 2023		**5,187,338**	**5,626,307**	**6,448,836**	**79,932**	**7,276,892**	**24,619,305**
Depreciation							
At 1 January 2022		**(358,945)**	**(993,915)**	**(1,416,541)**	**(23,807)**	**(1,797,551)**	**(4,590,759)**
Depreciation charge for the year		(135,923)	(495,967)	(679,206)	(63,906)	(1,064,017)	(2,439,019)
Remeasurement		-	9,461	-	-	-	9,461
Reclassifications		-	(3,399)	41,883	(373,009)	335,080	555
Disposals		371	125,411	9,290	29,078	53,116	217,266
Effect of movements in exchange rates		8,951	7,509	(42,046)	5,437	(43,776)	(63,925)
At 31 December 2022		**(485,546)**	**(1,350,900)**	**(2,086,620)**	**(426,207)**	**(2,517,148)**	**(6,866,421)**
Depreciation charge for the year		(147,234)	(664,017)	(1,009,539)	(14,534)	(1,156,968)	(2,992,292)
Remeasurement		(394)	(148,751)	247,018	-	(169,066)	(71,193)
Reclassifications		(9,898)	9,500	(32,994)	399,684	(314,665)	51,627
Disposals		1,660	19,306	121,962	1,305	67,691	211,924
Effect of movements in exchange rates		(2,274)	(10,066)	5,445	(2,737)	39,308	29,676
At 31 December 2023		**(643,686)**	**(2,144,928)**	**(2,754,728)**	**(42,489)**	**(4,050,848)**	**(9,636,679)**
Impairment losses							
At 1 January 2022		**-**	**(327)**	-	**-**	**-**	**(327)**
Effect of movements in exchange rates		-	(11)	-	-	-	(11)
At 31 December 2022		-	**(338)**	-	**-**	**-**	**(338)**
Effect of movements in exchange rates		-	3	-	-	-	3
At 31 December 2023		-	**(335)**	-	-	-	**(335)**
Net book value							
At 31 December 2022		**4,477,698**	**3,001,884**	**2,052,581**	**456,595**	**2,404,638**	**12,393,396**
At 31 December 2023		**4,543,652**	**3,481,044**	**3,694,108**	**37,443**	**3,226,044**	**14,982,291**

16 Leases

As a lessee

The Group leases a number of properties for 1-99 years. The rental is payable as specified in the contract.

Extension options

The Group has extension options on property leases exercisable up to one year before the end of the contract period. The Group assesses at lease commencement date whether it is reasonably certain to exercise the extension options and will regularly reassess so.

	Consolidated financial statements		Separate financial statements	
Year ended 31 December	2023	2022	2023	2022
	(in thousand Baht)			
Amounts recognized in profit or loss				
Depreciation of right-of-use assets:				
- Leasehold land	147,234	135,923	-	-
- Buildings and building improvements	664,017	492,195	-	-
- Machinery and equipment	1,009,539	679,206	-	-
- Office furniture, fixtures and equipment	14,534	63,906	-	-
- Transportation equipment	1,156,968	1,064,017	-	-
Interest on lease liabilities	750,851	574,834	-	-
Expenses relating to short-term leases	154,402	138,435	-	-
Expenses relating to leases of low-value assets	47,778	26,007	-	-

In 2023, total cash outflow for leases of the Group was Baht 3,897.5 million *(2022: Baht 3,063.6 million)*.

17 Goodwill

	Note	Consolidated financial statements 2023	2022
		(in thousand Baht)	
Cost			
At 1 January		**17,967,291**	**17,410,642**
Acquired through business combinations	*4*	-	626,101
Effect of movements in exchange rates		(304,422)	(69,452)
At 31 December		**17,662,869**	**17,967,291**
Impairment loss			
At 1 January		(79,102)	-
Impairment loss	*14*	-	(79,102)
At 31 December		**(79,102)**	**(79,102)**
Net book value			
At 31 December		**17,583,767**	**17,888,189**

As at 31 December 2022, the carrying amount of a European cash generating unit to which goodwill belongs was higher than its recoverable amount, hence, an impairment loss of Baht 79.1 million was recognized and included in the Group's consolidated statement of income for the year ended 31 December 2022.

Impairment testing for the cash generating unit containing goodwill

For the purpose of impairment testing, goodwill has been allocated to the cash generating unit or group of cash generating units ("CGU") identified according to the lowest level within the entity for which information about goodwill is available and monitored for internal management purpose as follows:

	Consolidated financial statements	
	2023	2022
	(in million Baht)	
CGU 1 - Indorama Ventures OGL Holdings LP and its subsidiaries	7,151	7,222
CGU 2 - Avgol Industries 1953 Ltd. and its subsidiaries	4,765	4,812
Others	5,668	5,854
Total	**17,584**	**17,888**

The recoverable amounts of the CGU containing goodwill were based on discounted cash flows estimated by managements covering a five-year period. Cash flows beyond the five-year period are extrapolated using the growth rate not exceeding the long-term average growth rate for the business in which CGU operates, consistent with the assumptions that a market participant would make. The discount rate was a pre-tax measure estimated based on the historical industry average weighted-average cost of capital.

2023	**CGU1**	**CGU2**
Growth rate (%)	1.0	2.0
Discount rate (%)	8.5	9.6

2022	**CGU1**	**CGU2**
Growth rate (%)	1.0	2.0
Discount rate (%)	9.2	9.6

The increase of the discount rate to 10.3% and 11.9% *(2022: 10.7% and 16.0%, respectively)* in CGU 1 and CGU 2, respectively would remove the remaining headroom for goodwill impairment.

18 Other intangible assets

	Note	Consolidated financial statements										
		Rights acquired	Supplier contract and relationships	Software licenses	Technology licenses and knowhow	Customer contracts and relationships	Trade name and trademarks	Chemicals exchange contract	Capitalized development expenditure	Environment rights	Intangible assets under development	Total
		(in thousand Baht)										
Cost												
At 1 January 2022		**250,806**	**7,712,218**	**769,901**	**12,223,295**	**19,971,858**	**3,540,891**	**334,197**	**1,293,102**	**282,387**	**4,333,977**	**50,712,632**
Additions		12,901	-	369,728	2,006	3,653	1,244	-	81,805	828,959	2,525,846	3,826,142
Acquisitions through business combinations												
• Ngoc Nghia Industry - Service - Trading Joint Stock Company	*4(iii)*	-	44,156	632	-	542,311	-	-	-	-	-	587,099
• Filatura Tollegno 1900 S.r.l.	*4(iv)*	-	-	-	-	-	4,950	-	-	-	-	4,950
Transfer		-	-	1,577,102	-	-	-	-	-	-	(1,577,102)	-
Reclassifications		184	-	9,192	(23,027)	(1,550)	-	-	-	(244)	-	(15,445)
Write-off		(184)	-	(10,452)	-	-	-	-	(5)	(401,996)	(1,029)	(413,666)
Effect of movements in exchange rates		3,538	117,187	(14,879)	196,932	291,709	(15,504)	11,424	(24,068)	(9,890)	(234)	556,215
At 31 December 2022		**267,245**	**7,873,561**	**2,701,224**	**12,399,206**	**20,807,981**	**3,531,581**	**345,621**	**1,350,834**	**699,216**	**5,281,458**	**55,257,927**
Additions		601	-	268,704	34	2,403	1,893	-	71,541	1,116,382	1,879,293	3,340,851
Transfer		-	-	3,274,888	-	-	-	-	804	-	(3,275,692)	-
Reclassifications		-	-	171,825	-	(5,441)	-	-	(8,300)	5,441	-	163,525
Write-off		-	-	(9,479)	2	-	-	-	-	(719,125)	(6,355)	(734,957)
Effect of movements in exchange rates		(3,350)	68,475	40,367	144,532	(18,852)	(25,795)	(3,392)	21,148	29,995	438	253,566
At 31 December 2023		**264,496**	**7,942,036**	**6,447,529**	**12,543,774**	**20,786,091**	**3,507,679**	**342,229**	**1,436,027**	**1,131,909**	**3,879,142**	**58,280,912**

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	Note	Rights acquired	Supplier contract and relationships	Software licenses	Technology licenses and knowhow	Customer contracts and relationships	Trade name and trademarks	Chemicals exchange contract	Capitalized development expenditure	Environment rights	Intangible assets under development	Total
		Consolidated financial statements										
		(in thousand Baht)										
Amortization												
At 1 January 2022		**(104,979)**	**(3,385,639)**	**(562,893)**	**(4,573,746)**	**(6,184,171)**	**(1,265,326)**	**(171,556)**	**(572,982)**	**(61)**	-	**(16,821,353)**
Amortization charge for the year		(19,171)	(396,978)	(212,015)	(694,721)	(1,042,997)	(307,099)	(18,367)	(122,416)	-	-	(2,813,764)
Write-off		-	-	3,241	-	-	-	-	1	-	-	3,242
Reclassifications		-	-	-	(19,040)	-	-	-	-	60	-	(18,980)
Effect of movements in exchange rates		187	(22,713)	(73)	(85,960)	(5,706)	41,699	(5,601)	13,126	1	-	(65,040)
At 31 December 2022		**(123,963)**	**(3,805,330)**	**(771,740)**	**(5,373,467)**	**(7,232,874)**	**(1,530,726)**	**(195,524)**	**(682,271)**	**-**	-	**(19,715,895)**
Amortization charge for the year		(20,016)	(324,979)	(555,186)	(689,688)	(914,788)	(267,403)	(18,232)	(39,236)	-	-	(2,829,528)
Write-off		-	-	2,269	-	-	-	-	-	-	-	2,269
Reclassifications		-	-	(112,373)	-	-	-	-	-	-	-	(112,373)
Effect of movements in exchange rates		(354)	(48,926)	(20,974)	(33,346)	4,877	27,124	2,225	(10,916)	-	-	(80,290)
At 31 December 2023		**(144,333)**	**(4,179,235)**	**(1,458,004)**	**(6,096,501)**	**(8,142,785)**	**(1,771,005)**	**(211,531)**	**(732,423)**	**-**	-	**(22,735,817)**
Impairment losses												
At 1 January 2022		**(326)**	**-**	**(544)**	**-**	**(21,109)**	**-**	**-**	**-**	**-**	-	**(21,979)**
Impairment losses	*14*	(25,985)	-	(46,505)	(229,323)	(192,240)	(174,603)	-	(161,308)	-	(12,216)	(842,180)
Effect of movements in exchange rates		112	-	191	236	5,746	180	-	166	-	13	6,644
At 31 December 2022		**(26,199)**	**-**	**(46,858)**	**(229,087)**	**(207,603)**	**(174,423)**	**-**	**(161,142)**	**-**	**(12,203)**	**(857,515)**
Write-off		-	-	-	-	-	-	-	-	-	6,355	6,355
Effect of movements in exchange rates		(761)	-	(1,365)	(7,502)	(515)	(5,712)	-	(5,447)	-	(330)	(21,632)
At 31 December 2023		**(26,960)**	-	**(48,223)**	**(236,589)**	**(208,118)**	**(180,135)**	**-**	**(166,589)**	**-**	**(6,178)**	**(872,792)**
Net book value												
At 31 December 2022		**117,083**	**4,068,231**	**1,882,626**	**6,796,652**	**13,367,504**	**1,826,432**	**150,097**	**507,421**	**699,216**	**5,269,255**	**34,684,517**
At 31 December 2023		**93,203**	**3,762,801**	**4,941,302**	**6,210,684**	**12,435,188**	**1,556,539**	**130,698**	**537,015**	**1,131,909**	**3,872,964**	**34,672,303**

The amortization of other intangible assets is allocated to the cost inventory and is recognized as cost of sales of goods amounting to Baht 1,069.6 million *(2022: Baht 1,238.6 million)* and administrative expenses amounting to Baht 1,759.9 million *(2022: Baht 1,575.2 million)*.

Capitalized borrowing costs related to the intangible assets under development are amounted to Baht 77.2 million *(2022: Baht 94.8 million)*.

19 Other non-current assets

	Note	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
		(in thousand Baht)			
Advance tax credit		3,823,089	3,864,308	-	-
Advance payment on purchase of property, plant and equipment		2,360,672	1,684,173	-	771,920
Refundable deposits		492,100	601,388	-	-
Finance lease receivable from related party	*5*	354,289	378,646	-	-
Others		870,154	754,774	183,386	262,169
Total		**7,900,304**	**7,283,289**	**183,386**	**1,034,089**

20 Interest-bearing liabilities

Certain interest-bearing liabilities require specific covenants such as maintenance of financial ratios, the declaration and payment of dividends, acquisition of major fixed assets, additional indebtedness, and share transfers.

Interest-bearing liabilities comprise the following classifications.

	Consolidated financial statements					
	2023			2022		
	Secured	Unsecured	Total	Secured	Unsecured	Total
	(in thousand Baht)					
Bank overdrafts	506,605	2,177,842	2,684,447	691,673	3,060,138	3,751,811
Short-term loans from financial institutions	5,540,973	20,193,823	25,734,796	9,138,348	18,357,666	27,496,014
Long-term loans from financial institutions	11,913,877	114,373,743	126,287,620	10,990,929	119,975,162	130,966,091
Lease liabilities	13,553,065	-	13,553,065	10,900,286	-	10,900,286
Debentures	-	86,072,082	86,072,082	-	81,199,128	81,199,128
Total interest-bearing liabilities	**31,514,520**	**222,817,490**	**254,332,010**	**31,721,236**	**222,592,094**	**254,313,330**

As at 31 December 2023, the Group and the Company's the interest rate of long term loans from financial institutions and debentures were in range of 2.39-7.86 % per annum and 2.48-5.30 % per annum, respectively *(2022: 1.00-8.00 % per annum and 2.48-5.30 % per annum, respectively)*.

		Separate financial statements					
		2023			2022		
	Note	Secured	Unsecured	Total	Secured	Unsecured	Total
		(in thousand Baht)					
Long-term loans from							
- financial institutions		-	-	-	-	2,536,088	2,536,088
- related parties	*5*	-	12,500,000	12,500,000	-	8,000,000	8,000,000
Debentures		-	69,252,960	69,252,960	-	63,355,283	63,355,283
Total interest-bearing liabilities		**-**	**81,752,960**	**81,752,960**	**-**	**73,891,371**	**73,891,371**

Assets pledged as security for liabilities *At 31 December*	Consolidated financial statements 2023	2022	Separate financial statements 2023	2022
		(in thousand Baht)		
Trade accounts receivable	16,770,916	20,678,578	-	-
Inventories	28,149,799	33,382,246	-	-
Property, plant and equipment	23,014,353	23,097,049	-	-
Right-of-use assets	14,982,291	12,393,396	-	-
Total	**82,917,359**	**89,551,269**	**-**	**-**

Changes in liabilities arising from financing activities

	Note	Consolidated financial statements	Separate financial statements
		(in thousand Baht)	
Bank overdrafts and short-term loans from financial institutions and former shareholder of UCY			
2023			
At 1 January		31,247,825	-
Changes from financing cash flows			
- Proceeds from bank overdrafts and short-term loans from financial institutions		585,444,751	9,058,008
- Repayments of bank overdrafts and short-term loans from financial institutions		(588,220,119)	(9,008,423)
Effect of changes in exchange rates		(53,214)	(49,585)
At 31 December		**28,419,243**	**-**
2022			
At 1 January		26,618,760	-
Changes from financing cash flows			
- Proceeds from bank overdrafts and short-term loans from financial institutions		363,172,925	-
- Repayments of bank overdrafts and short-term loans from financial institutions and former shareholder of UCY		(359,560,386)	-
Acquisitions through business combinations	*4*	1,309,921	-
Effect of changes in exchange rates		(293,395)	-
At 31 December		**31,247,825**	**-**

	Note	Consolidated financial statements	Separate financial statements
		(in thousand Baht)	
Long-term loans from financial institutions and related parties			
2023			
At 1 January		130,966,091	10,536,088
Changes from financing cash flows			
- Proceeds from long-term loans from financial institutions		48,968,862	-
- Proceeds from long-term loans from related parties		-	4,500,000
- Repayments of long-term loans from financial institutions		(53,162,813)	(2,441,315)
- Additional deferred financing fee of long-term loans from financial institutions		(315,364)	-
Amortization of deferred financing fee of long-term loans from financial institutions		464,404	1,194
Effect of changes in exchange rates		(633,560)	(95,967)
At 31 December		**126,287,620**	**12,500,000**
Less current portion of long-term loans from financial institutions and related parties		(22,977,568)	-
Net long-term loans from financial institutions and related parties		**103,310,052**	**12,500,000**
2022			
At 1 January		110,663,800	15,210,963
Changes from financing cash flows			
- Proceeds from long-term loans from financial institutions		45,897,119	-
- Proceeds from long-term loans from related party		-	2,000,000
- Repayments of long-term loans from financial institutions		(29,771,794)	(6,775,996)
- Additional deferred financing fee of long-term loans from financial institutions		(379,487)	-
Acquisitions through business combinations	*4*	399,246	-
Amortization of deferred financing fee of long-term loans from financial institutions		315,965	17,800
Effect of changes in exchange rates		3,841,242	83,321
At 31 December		**130,966,091**	**10,536,088**
Less current portion of long-term loans from financial institutions and related party		(28,501,962)	(2,536,088)
Net long-term loans from financial institutions and related party		**102,464,129**	**8,000,000**

As at 31 December 2023, the Group and the Company had unutilized credit facilities totaling Baht 62,813.1 million and Baht 6,935.1 million, respectively *(2022: Baht 61,706.9 million and Baht 8,752.2 million, respectively)*.

	Consolidated financial statements	Separate financial statements
	(in thousand Baht)	
Debentures		
2023		
At 1 January	81,199,128	63,355,283
Changes from financing cash flows		
- Proceeds from issuance of debentures	10,000,000	10,000,000
- Repayment of debentures	(5,277,593)	(4,100,000)
- Additional deferred issuance cost of debentures	(17,956)	(17,956)
Amortization of deferred issuance cost of debentures	39,327	15,633
Effect of changes in exchange rates	129,176	-
At 31 December	**86,072,082**	**69,252,960**
Less current portion of debentures	(15,558,225)	(4,159,098)
Net debentures	**70,513,857**	**65,093,862**
2022		
At 1 January	76,600,483	57,905,633
Changes from financing cash flows		
- Proceeds from issuance of debentures	12,000,000	12,000,000
- Repayment of debentures	(7,756,431)	(6,545,000)
- Additional deferred issuance cost of debentures	(19,570)	(19,570)
Amortization of deferred issuance cost of debentures	40,146	14,220
Effect of changes in exchange rates	334,500	-
At 31 December	**81,199,128**	**63,355,283**
Less current portion of debentures	(5,274,945)	(4,086,621)
Net debentures	**75,924,183**	**59,268,662**

On 18 May 2023, the Company issued Baht 10 billion of 4-tranche debentures no.1/2023 ("the Debentures") at par value and offering price of Baht 1,000 per unit. The Debentures were offered to institutional and/or high-net-worth investors. The Debentures are unsubordinated and unsecured debentures with a debenture holders' representative in the name-registered certificate. The offering details are as below:

- Tranche 1: due in 2026 with a tenor of 3 years for a principal amount of Baht 2.95 billion and a fixed coupon rate of 3.00% per annum,
- Tranche 2: due in 2028 with a tenor of 5 years for a principal amount of Baht 3.50 billion and a fixed coupon rate of 3.40% per annum,
- Tranche 3: due in 2033 with a tenor of 10 years for a principal amount of Baht 1.55 billion and a fixed coupon rate of 3.89% per annum, and
- Tranche 4: due in 2035 with a tenor of 12 years for a principal amount of Baht 2.00 billion and a fixed coupon rate of 4.02% per annum.

On 1 April 2022, the Company issued Baht 12 billion of triple-tranche bonds no. 1/2022 ("the Bonds") at par value and offering price of Baht 1,000 per unit. The Bonds were offered to institutional and/or high-net-worth investors. The Bonds are unsubordinated and unsecured debentures with a debenture holders' representative in the name-registered certificate with details below:

- Tranche 1: due in 2027 with a tenor of 5 years for a principal amount of Baht 4.3 billion and a coupon rate of 2.66% per annum,
- Tranche 2: due in 2029 with a tenor of 7 years for a principal amount of Baht 2.7 billion and a coupon rate of 3.24% per annum, and
- Tranche 3: due in 2032 with a tenor of 10 years for a principal amount of Baht 5.0 billion and a coupon rate of 3.65% per annum.

21 Other current liabilities

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
		(in thousand Baht)			
Accrued operating expenses		10,106,969	10,393,506	17,268	78,235
Consideration payable	*4*	5,206,884	66,229	-	-
Other payables		3,543,953	3,937,096	317,913	335,848
Materials price adjustments payable		1,756,138	2,478,018	-	-
Interest payable		1,338,593	1,086,170	399,400	388,445
Contract liabilities	*25*	1,126,643	1,715,062	-	-
Value added tax payable		807,940	860,073	-	-
Withholding tax payable		502,994	600,858	-	-
Payable for acquiring joint operation		-	209,344	-	-
Others		2,113,228	1,812,194	3,063	2,837
Total		**26,503,342**	**23,158,550**	**737,644**	**805,365**

22 Non-current provisions for employee benefits

	Consolidated financial statements		Separate financial statements	
At 31 December	2023	2022	2023	2022
	(in thousand Baht)			
Statement of financial position				
Non-current provisions for:				
Post-employment benefits:				
Thailand legal severance plan	977,196	921,381	-	-
Defined benefit plans established in Europe	2,912,682	2,673,013	-	-
Defined benefit plans established in Americas	1,967,300	1,923,064	-	-
Defined benefit plans established in rest of the world	634,491	571,915	-	-
Thailand other long-term employee benefits	102,398	83,451	-	-
Total	**6,594,067**	**6,172,824**	**-**	**-**

For the year ended 31 December	Consolidated financial statements 2023	2022	Separate financial statements 2023	2022
		(in thousand Baht)		
Statement of income:				
Recognized in profit or loss:				
Post-employment benefits:				
Thailand legal severance plan	77,593	63,154	-	-
Defined benefit plans established in Europe	234,654	296,722	-	-
Defined benefit plans established in Americas	378,696	458,154	-	-
Defined benefit plans established in rest of the world	102,700	58,108	-	-
Thailand other long-term employee benefits	24,591	74,417	-	-
Total	**818,234**	**950,555**	**-**	**-**
Recognized in other comprehensive income:				
Remeasurement losses (gains):				
Actuarial losses (gains)	686,939	(3,385,320)	-	-
Return (losses) on plan assets excluding amounts included in interest income	(347,294)	1,649,017	-	-
Total	**339,645**	**(1,736,303)**	**-**	**-**

Thailand legal severance plan and other long-term employee benefits

The subsidiaries registered in Thailand operate a defined benefit plan based on the requirement of Thai Labour Protection Act B.E. 2541 (1998) to provide retirement benefits to employees based on pensionable remuneration and length of service. The subsidiaries registered in Thailand also operate long service award plans as part of other long-term employee benefits to certain employees based on remuneration and length of service.

These defined benefit plans expose the Group to actuarial risks, such as interest rate risk and longevity risk.

The Group expects to pay Baht 266.6 million in contributions to its defined benefit plans in 2024.

Present value of the defined benefit obligations	Consolidated financial statements 2023	2022	Separate financial statements 2023	2022
		(in thousand Baht)		
At 1 January	1,004,832	815,754	-	-
Recognized in profit or loss:				
Current service costs	60,635	92,488	-	-
Past service costs	-	25,656	-	-
Interest on obligation	20,730	12,794	-	-

Present value of the defined benefit obligations	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Actuarial losses for other long-term employee benefits	20,819	6,633	-	-
	102,184	**137,571**	**-**	**-**
Recognized in other comprehensive income:				
Actuarial (gains) losses				
- Demographic assumptions	40,448	10,689	-	-
- Financial assumptions	(12,203)	(42,497)	-	-
- Experience adjustment	25,899	133,511	-	-
	54,144	**101,703**	**-**	**-**
Others				
Benefits paid by the plan	(81,566)	(50,196)	-	-
	(81,566)	**(50,196)**	**-**	**-**
At 31 December	**1,079,594**	**1,004,832**	**-**	**-**

Defined benefit plans established in Europe

These defined benefit plans expose the Group to actuarial risks, such as currency risk, interest rate risk, longevity risk and market (investment) risk.

The Group expects to pay Baht 171.1 million (EUR 4.5 million, GHC 0.5 million) in contributions to its defined benefit plans in 2024.

The statement of financial position obligation was determined as follows:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Excess of present value of obligations over fair value of plan assets	2,825,959	2,774,093	-	-
Effect of movement in exchange rates	86,723	(101,080)	-	-
Statement of financial position obligation	**2,912,682**	**2,673,013**	**-**	**-**

Present value of the defined benefit obligations	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
At 1 January	4,710,944	6,332,930	-	-
Recognized in profit or loss:				
Current service costs	138,187	192,110	-	-
Past service costs	-	66,614	-	-
Interest on obligation	163,373	74,906	-	-
Actuarial losses	944	1,602	-	-
	302,504	**335,232**	**-**	**-**

Present value of the defined benefit obligations	Note	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
			(in thousand Baht)		
Recognized in other comprehensive income:					
Actuarial (gains) losses					
- Demographic assumptions		32,135	70,341	-	-
- Financial assumptions		200,618	(1,888,132)	-	-
- Experience adjustment		(10,410)	65,356	-	-
- Others		-	28,392	-	-
		222,343	**(1,724,043)**	**-**	**-**
Others					
Defined benefit obligations assumed through business combinations	*4(iv)*	-	42,636	-	-
Benefits paid by the plan		(130,288)	(111,064)	-	-
Expected employees contribution		14,417	14,874	-	-
Effect of movements in exchange rates		156,463	(179,621)	-	-
		40,592	**(233,175)**	**-**	**-**
At 31 December		**5,276,383**	**4,710,944**	**-**	**-**

Fair value of plan assets	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
		(in thousand Baht)		
At 1 January	2,037,931	2,820,040	-	-
Recognized in profit or loss:				
Interest income	67,850	38,510	-	-
	67,850	**38,510**	**-**	**-**
Recognized in other comprehensive income:				
Return (loss) on plan assets excluding amounts included in interest income	**58,946**	**(991,991)**	**-**	**-**
Others				
Expected plan participant contributions	16,668	16,636	-	-
Benefits paid by the plan	(41,066)	(32,929)	-	-
Contribution paid into the plan	153,632	266,205	-	-
Effect of movements in exchange rates	69,740	(78,540)	-	-
	198,974	**171,372**	**-**	**-**
At 31 December	**2,363,701**	**2,037,931**	**-**	**-**
Statement of financial position obligation at 31 December	**2,912,682**	**2,673,013**	**-**	**-**

Plan assets

Plan assets comprise the following:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Equity securities	36,446	42,520	-	-
Insurance contract	2,256,422	1,923,435	-	-
Interest-bearing securities	66,079	71,976	-	-
Other	4,754	-	-	-
Total	**2,363,701**	**2,037,931**	**-**	**-**

Defined benefit plans established in Americas

These defined benefit plans expose the Group to actuarial risks, such as currency risk, interest rate risk, longevity risk and market (investment) risk.

The Group expects to pay Baht 387.6 million (USD 10.5 million, BRL 3.9 million) in contributions to its defined benefit plans in 2024.

The statement of financial position obligation was determined as follows:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Excess of present value of obligations over fair value of plan assets	1,906,049	1,793,042	-	-
Effect of movement in exchange rates	61,251	130,022	-	-
Statement of financial position obligation	**1,967,300**	**1,923,064**	**-**	**-**

Present value of the defined benefit obligations	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
At 1 January	4,887,233	6,249,069	-	-
Recognized in profit or loss:				
Current service costs	228,583	331,822	-	-
Past service costs	4,576	-	-	-
Interest on obligation	285,002	209,800	-	-
Actuarial losses (gains)	3,551	(2,564)	-	-
	521,712	**539,058**	**-**	**-**
Recognized in other comprehensive income:				
Actuarial (gains) losses				
- Demographic assumptions	27,441	(5,229)	-	-
- Financial assumptions	295,841	(1,837,744)	-	-
- Experience adjustment	75,682	74,574	-	-
- Others	78	111	-	-
	399,042	**(1,768,288)**	**-**	**-**

Present value of the defined benefit obligations	Note	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
			(in thousand Baht)		
Others					
Defined benefit obligations assumed through business combinations	*4(ii)*	-	67,498	-	-
Benefits paid by the plan		(382,087)	(467,314)	-	-
Expected employees contribution		-	8,468	-	-
Effect of movements in exchange rates		22,312	258,742	-	-
		(359,775)	**(132,606)**	**-**	**-**
At 31 December		**5,448,212**	**4,887,233**	**-**	**-**

Fair value of plan assets	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
		(in thousand Baht)		
At 1 January	2,964,169	3,666,894	-	-
Recognized in profit or loss:				
Interest income	166,143	113,173	-	-
Others	(23,127)	(32,269)	-	-
	143,016	**80,904**	**-**	**-**
Recognized in other comprehensive income:				
Return (loss) on plan assets excluding amounts included in interest income	**288,460**	**(656,387)**	**-**	**-**
Others				
Benefits paid by the plan	(234,332)	(426,347)	-	-
Contribution paid into the plan	358,538	170,384	-	-
Effect of movements in exchange rates	(38,939)	128,721	-	-
	85,267	**(127,242)**	**-**	**-**
At 31 December	**3,480,912**	**2,964,169**	**-**	**-**
Statement of financial position obligation at 31 December	**1,967,300**	**1,923,064**	-	**-**

Plan assets

Plan assets comprise the following:

	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
		(in thousand Baht)		
Equity securities	2,061,746	1,725,337	-	-
Government bonds	4,279	4,210	-	-
Interest-bearing securities	1,393,175	1,209,403	-	-
Others	21,712	25,219	-	-
Total	**3,480,912**	**2,964,169**	**-**	**-**

Defined benefit plans established in rest of the world

These defined benefit plans expose the Group to actuarial risks, such as currency risk, interest rate risk, longevity risk and market (investment) risk.

The Group expects to pay Baht 31.6 million in contributions to its defined benefit plans in 2024.

The statement of financial position obligation was determined as follows:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Excess of present value of obligations over fair value of plan assets	633,898	609,116	-	-
Effect of movements in exchange rates	593	(37,201)	-	-
Statement of financial position obligation	**634,491**	**571,915**	**-**	**-**

Present value of the defined benefit obligations	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
At 1 January	608,747	624,519	-	-
Recognized in profit or loss:				
Current service costs	72,628	31,293	-	-
Past service costs	(10,483)	(14,738)	-	-
Interest on obligation	43,344	39,952	-	-
Actuarial losses	21	4,046	-	-
	105,510	**60,553**	**-**	**-**
Recognized in other comprehensive income:				
Actuarial (gains) losses				
- Financial assumptions	15,869	1,730	-	-
- Experience adjustment	(4,538)	3,579	-	-
- Others	79	-	-	-
	11,410	**5,309**	**-**	**-**
Others				
Benefits paid by the plan	(49,092)	(42,012)	-	-
Effect of movements in exchange rates	62	(39,622)	-	-
	(49,030)	**(81,634)**	**-**	**-**
At 31 December	**676,637**	**608,747**	**-**	**-**

Fair value of plan assets	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
At 1 January	36,832	35,648	-	-
Recognized in profit or loss:				
Interest income	2,810	2,445	-	-
	2,810	**2,445**	**-**	**-**
Recognized in other comprehensive income:				
Loss on plan assets excluding amounts included in interest income	**(112)**	**(638)**	**-**	**-**
Others				
Contributions paid into the plan	5,074	8,412	-	-
Benefits paid by the plan	(1,927)	(6,615)	-	-
Effect of movements in exchange rates	(531)	(2,420)	-	-
	2,616	**(623)**	**-**	**-**
At 31 December	**42,146**	**36,832**	**-**	**-**
Statement of financial position obligation at 31 December	**634,491**	**571,915**	**-**	**-**

Plan assets

Plan assets comprise the following:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Insurance contract	38,293	21,725	-	-
Others	3,853	15,107	-	-
Total	**42,146**	**36,832**	**-**	**-**

Principal actuarial assumptions	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(%)		*(%)*	
Thailand legal severance plan				
Discount rate	2.70	2.50	-	-
Future salary increases	4.00-5.50	4.00-5.50	-	-
Employee turnover	0.00-40.00	0.00-40.00	-	-

Assumptions regarding future mortality have been based on published statistics and mortality tables.

At 31 December 2023, the weighted-average duration of the defined benefit obligation was 6.00 years *(2022: 7.00 years)*.

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(%)		(%)	
Defined benefit plans established in Europe				
Discount rate	2.86-23.10	0.03-8.75	-	-
Expected return on plan assets	2.20-3.61	0.00-3.95	-	-
Future salary increases	2.00-21.00	0.02-15.00	-	-
Employee turnover	0.00-18.90	0.00-18.90	-	-

At 31 December 2023, the weighted-average duration of the defined benefit obligation were 7.40 to 25.20 years *(2022: 7.80 to 25.00 years)*.

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(%)		(%)	
Defined benefit plans established in Americas				
Discount rate	2.70-9.48	2.20-9.60	-	-
Expected return on plan assets	5.15-5.25	5.25-9.60	-	-
Future salary increases	2.50-4.75	2.50-4.58	-	-
Employee turnover	5.00-32.70	4.41-32.70	-	-

At 31 December 2023, the weighted-average duration of the defined benefit obligation were 0.50 to 13.30 years *(2022: 1.01 to 13.60 years)*.

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(%)		(%)	
Defined benefit plans established in rest of the world				
Discount rate	6.16-7.35	6.20-7.50	-	-
Expected return on plan assets	7.35	7.50	-	-
Future salary increases	4.50-8.00	4.50-8.00	-	-
Employee turnover	0.00-12.00	0.00-15.00	-	-

At 31 December 2023, the weighted-average duration of the defined benefit obligation were 8.76 to 18.42 years *(2022: 7.00 to 15.01 years)*.

Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

	Consolidated financial statements			
	0.5% increase in assumption		0.5% decrease in assumption	
At 31 December	2023	2022	2023	2022
	(in million Baht)			
Thailand legal severance plan				
Discount rate	(30)	(28)	32	29
Future salary increases	32	28	(30)	(27)
Employee turnover	(32)	(29)	34	31
Defined benefit plans established in Europe				
Discount rate	(424)	(372)	488	428
Expected return on plan assets	(17)	(14)	19	16
Future salary increases	48	44	(47)	(42)
Employee turnover	(9)	(10)	9	11
Defined benefit plans established in Americas				
Discount rate	(288)	(289)	319	317
Expected return on plan assets	(1)	(1)	1	1
Future salary increases	9	21	(9)	(24)
Employee turnover	(2)	(1)	2	1
Defined benefit plans established in rest of the world				
Discount rate	(25)	(21)	27	22
Future salary increases	26	23	(24)	(22)
Employee turnover	(2)	(1)	2	1

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

23 Legal reserve

Section 116 of the Public Limited Companies Act B.E. 2535 (1992) requires that the Company shall allocate not less than 5% of its annual net profit, less any accumulated losses brought forward, to a reserve account ("legal reserve"), until this account reaches an amount not less than 10% of the registered authorized capital. The legal reserve is not available for dividend distribution.

24 Subordinated perpetual debentures

On 8 November 2019, the Company has issued and offered Subordinated Perpetual Debentures of the Company No. 1/2019 (the "Debentures") in the amount of Baht 15,000 million at par value with bullet payment upon dissolution of the Company or upon the exercise of the Company's early redemption right per conditions as stipulated in the terms and conditions of the Debentures. The Debentures are unsecured and unconvertible. The Debentures bear interest at 5% per annum for the first to the fifth years; and thereafter, the interest rate for the Debentures shall be in accordance with the details stated under the terms and conditions in relation to the Debentures. The interest is paid on a quarterly basis. However, the Company has the sole right to unconditionally defer interest and cumulative interest payments to the Debentures holders without time and deferral amount limitation. If the Company defers the interest payment, the Company shall not redeem, reduce, cancel, acquire or buy-back for any consideration on any instrument or security issued by the Company which rank pari passu or junior to the Debentures and shall not declare and make any dividend payment.

25 Segment information and disaggregation of revenue

(a) Segment information

The Group's reportable segments, as described below, represent the Group's strategic divisions. The strategic divisions offer different products, and are managed separately because they require different technology and marketing strategies. For each of the strategic divisions, the chief operating decision maker ("CODM") reviews internal management reports on at least a quarterly basis.

Reportable segment 1	Manufacture and distribution of PET value chain comprising PX, PTA, PET, and Recycling (Integrated PET), specialty PET-related chemicals comprising PIA and NDC (Specialty Chemicals) and PET preforms and packaging (Packaging) ("Combined PET")
Reportable segment 2	Manufacture and distribution of integrated EG, integrated purified EO, PO/MTBE and integrated surfactants comprising EOA, LAB and others ("Integrated Oxides and Derivatives")
Reportable segment 3	Manufacture and distribution of polyester, rayon, nylon, polypropylene, composites and worsted wool fibers, for three end-use segments: mobility, lifestyle and hygiene ("Fibers")

There are varying levels of integration between reportable segments. This integration includes sales of goods.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit being profit/(loss) before depreciation and amortization, finance income, finance costs and tax expense and others, as included in the internal management reports that are reviewed by the Group's CODM. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments.

In presenting information about geographical areas, segment revenue is based on the geographical location of customers. Segment assets are based on the geographical location of the assets.

The Group's main revenue is derived from contracts with customers and recognized at a point in time.

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

Year ended 31 December 2023	Consolidated financial statements				
	Combined PET	**Integrated Oxides and Derivatives**	**Fibers**	**Unallocated and Eliminations**	**Total**
			(in thousand Baht)		
Information about reportable segments					
External revenue	309,111,910	121,921,500	110,412,913	11,725	541,458,048
Inter-segment revenue	19,355,453	1,724,743	581,317	(21,661,513)	-
Total segment revenue	**328,467,363**	**123,646,243**	**110,994,230**	**(21,649,788)**	**541,458,048**
Disaggregation of revenue from sales of goods					
Primary geographical markets					
Thailand	16,615,232	77,384	4,701,276	5,914	21,399,806
United States of America	86,535,635	57,323,609	19,176,915	4,861	163,041,020
Brazil	16,157,990	28,090,944	3,874,004	-	48,122,938
Rest of the world	189,803,053	36,429,563	82,660,718	950	308,894,284
Total segment revenue	**309,111,910**	**121,921,500**	**110,412,913**	**11,725**	**541,458,048**
Unallocated revenue	-	-	-	5,091,116	5,091,116
Total revenue	**328,467,363**	**123,646,243**	**110,994,230**	**(16,558,672)**	**546,549,164**
Cost of sales of goods	282,751,079	90,031,947	99,791,778	(21,568,637)	451,006,167
Distribution costs and administrative expenses	26,906,252	18,760,593	9,366,586	(7,130,255)	47,903,176
Net foreign exchange loss (gain)	363,424	(176,425)	17,335	(1,700,112)	(1,495,778)
Unallocated expenses	-	-	-	48,562,606	48,562,606
Total expenses	**310,020,755**	**108,616,115**	**109,175,699**	**18,163,602**	**545,976,171**

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

Year ended 31 December 2023	Consolidated financial statements				
	Combined PET	**Integrated Oxides and Derivatives**	**Fibers**	**Unallocated and Eliminations**	**Total**
			(in thousand Baht)		
Segment profit before depreciation and amortization, finance costs, tax expense, and others	**19,239,903**	**15,331,014**	**3,707,865**	**724,616**	**39,003,398**
Depreciation and amortization					(27,697,295)
Impairment loss of property, plant and equipment, goodwill and other intangible assets					(10,726,951)
Share of net profit of associate and joint ventures accounted for using equity method					8,283
Finance income					1,182,622
Finance costs					(15,367,212)
Loss before tax expense					**(13,597,155)**
Tax income					2,683,811
Loss for the year					**(10,913,344)**
At / for the year ended 31 December 2023					
Trade accounts receivable	31,897,036	12,376,768	11,316,461	(11,441,949)	44,148,316
Inventories	56,727,456	16,154,184	23,963,305	-	96,844,945
Property, plant and equipment	134,646,246	118,049,692	58,062,009	-	310,757,947
Unallocated assets	-	-	-	138,380,759	138,380,759
Total assets	**223,270,738**	**146,580,644**	**93,341,775**	**126,938,810**	**590,131,967**
Trade accounts payable	72,539,730	14,419,685	22,626,336	(7,805,415)	101,780,336
Unallocated liabilities	-	-	-	310,283,710	310,283,710
Total liabilities	**72,539,730**	**14,419,685**	**22,626,336**	**302,478,295**	**412,064,046**
Capital expenditure and investments	10,630,876	7,495,164	5,011,040	3,219,914	26,356,994

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

	Consolidated financial statements				
Year ended 31 December 2022	Combined PET	Integrated Oxides and Derivatives	Fibers	Unallocated and Eliminations	Total
			(in thousand Baht)		
Information about reportable segments					
External revenue	382,881,785	143,587,829	129,794,419	2,415	656,266,448
Inter-segment revenue	22,074,948	4,107,826	1,410,643	(27,593,417)	-
Total segment revenue	**404,956,733**	**147,695,655**	**131,205,062**	**(27,591,002)**	**656,266,448**
Disaggregation of revenue from sales of goods					
Primary geographical markets					
Thailand	16,327,744	121,886	4,921,204	2,415	21,373,249
United States of America	100,017,484	69,946,257	22,602,945	-	192,566,686
Brazil	19,656,588	31,293,841	4,721,575	-	55,672,004
Rest of the world	246,879,969	42,225,845	97,548,695	-	386,654,509
Total segment revenue	**382,881,785**	**143,587,829**	**129,794,419**	**2,415**	**656,266,448**
Net foreign exchange gain (loss)	383,441	46,823	270,042	(1,889,546)	(1,189,240)
Unallocated revenue	-	-	-	10,189,438	10,189,438
Total revenue	**405,340,174**	**147,742,478**	**131,475,104**	**(19,291,110)**	**665,266,646**
Cost of sales of goods	325,371,205	108,432,550	114,308,022	(27,676,550)	520,435,227
Distribution costs and administrative expenses	31,785,917	15,968,370	11,160,054	(5,827,702)	53,086,639
Unallocated expenses	-	-	-	7,972,862	7,972,862
Total expenses	**357,157,122**	**124,400,920**	**125,468,076**	**(25,531,390)**	**581,494,728**

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

Year ended 31 December 2022	Consolidated financial statements				
	Combined PET	**Integrated Oxides and Derivatives**	**Fibers**	**Unallocated and Eliminations**	**Total**
			(in thousand Baht)		
Segment profit before depreciation and amortization, finance costs, tax expense, and others	**49,464,515**	**26,052,899**	**8,186,388**	**337,803**	**84,041,605**
Depreciation and amortization					(25,721,404)
Impairment loss of property, plant and equipment, goodwill and other intangible assets					(8,645,118)
Share of net loss of associate and joint ventures accounted for using equity method					(22,761)
Finance income					946,764
Finance costs					(10,495,196)
Profit before tax expense					**40,103,890**
Tax expense					(5,773,693)
Profit for the year					**34,330,197**
At / for the year ended 31 December 2022					
Trade accounts receivable	34,340,548	13,117,789	10,649,558	(7,875,394)	50,232,501
Inventories	68,451,856	22,490,757	25,122,531	-	116,065,144
Property, plant and equipment	139,554,736	120,888,380	58,354,400	-	318,797,516
Unallocated assets	-	-	-	138,783,230	138,783,230
Total assets	**242,347,140**	**156,496,926**	**94,126,489**	**130,907,836**	**623,878,391**
Trade accounts payable	72,846,886	17,926,573	21,245,900	(5,473,152)	106,546,207
Unallocated liabilities	-	-	-	316,446,802	316,446,802
Total liabilities	**72,846,886**	**17,926,573**	**21,245,900**	**310,973,650**	**422,993,009**
Capital expenditure and investments	15,487,802	50,656,067	5,932,503	3,416,373	75,492,745

(b) Information about geographical areas

	Consolidated financial statements			
	Segment assets		Capital expenditure and investments	
	2023	2022	2023	2022
	(in thousand Baht)			
Thailand	39,108,229	38,676,443	3,859,380	4,229,930
Americas	265,783,100	303,719,645	15,560,388	57,170,059
Europe	171,951,615	162,322,590	3,201,181	6,709,819
Rest of the world	113,289,023	119,159,713	3,736,045	7,382,937
Total	**590,131,967**	**623,878,391**	**26,356,994**	**75,492,745**

(c) Contract Balances

The contract liabilities primarily relate to the advance consideration received from customers for sale of goods. The Group recognizes such contract liabilities as revenue when the goods are delivered to customers.

Material movement in the contract liabilities balances during the years are as follows:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
At 1 January	1,715,062	1,216,295	-	-
Recognized as revenue from sale of goods during the year	(23,052,889)	(47,467,181)	-	-
Advance received during the year	22,471,633	47,951,029	-	-
Acquisitions through business combinations	-	82,258	-	-
Effect of movements in exchange rates	(7,163)	(67,339)	-	-
At 31 December	**1,126,643**	**1,715,062**	**-**	**-**

26 Other income

	Note	Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
		(in thousand Baht)			
Insurance claim	*14*	2,253,249	4,223,664	-	-
Government incentive income		668,980	848,193	-	-
License income		229,652	1,271,730	-	-
Others	*5*	1,939,235	1,991,766	1,851,196	2,150,089
Total		**5,091,116**	**8,335,353**	**1,851,196**	**2,150,089**

During the year ended 31 December 2023, the Group recorded insurance claims for fire incidents in 2021 amounting to EUR 34.2 million (Baht 1,288.1 million) and BRL 115.9 million (Baht 807.9 million) for certain indirect subsidiaries in Germany and Brazil, respectively.

During the year ended 31 December 2022, the Group recorded insurance claims amounting to USD 64.0 million (Baht 2,243.2 million) for a lightning strike and subsequent flaring for a certain indirect subsidiary in USA and EUR 28.2 million (Baht 1,040.8 million) for a fire incident for an indirect subsidiary in Germany.

A certain indirect subsidiary recognized license income to provide a technology licenses and knowhow to enable the construction and operation to its client during the year ended 31 December 2023 and 2022 amounting to USD 5.7 million (Baht 196.9 million) and USD 31.6 million (Baht 1,107.5 million), respectively.

27 Expenses by nature

The statements of income include an analysis of expenses by function. Expenses by nature disclosed in accordance with the requirements of various TFRS were as follows:

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
			(in thousand Baht)		
Changes in inventories of finished goods and work in progress		(39,079,472)	(7,649,821)	-	-
Raw materials and consumables used		377,202,350	386,098,791	-	-
Provision for (reversal of) losses on inventories devaluation, net	*8*	(102,408)	2,098,472	-	-
Employee benefit expenses		47,528,765	45,066,107	33,140	30,880
Depreciation and amortization		27,697,295	25,721,404	-	-
Impairment loss on property, plant and equipment, goodwill and other intangible assets	*12, 14, 17, 18*	10,726,951	8,645,118	-	-
Freight		21,468,644	29,972,718	-	-

28 Income tax

Income tax recognized in profit or loss	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
		(in million Baht)		
Current tax expense				
Current year	2,813	6,746	90	86
Adjustment for under provided in prior years	425	390	-	-
	3,238	**7,136**	**90**	**86**
Deferred tax expense				
Movements in temporary differences	(5,916)	1,129	(496)	(1)
Recognition of previously unrecognized tax lossess	(6)	(2,491)	-	-
	(5,922)	**(1,362)**	**(496)**	**(1)**
Total tax expense (income)	**(2,684)**	**5,774**	**(406)**	**85**

	Consolidated financial statements					
	2023			2022		
Income tax	Before Tax	Tax (expense) benefit	Net of tax	Before tax	Tax (expense) benefit	Net of tax
	(in million Baht)					
Recognized in other comprehensive income						
Net investment hedge	518	(350)	168	(2,107)	(30)	(2,137)
Cash flow hedges reserve	(2,919)	255	(2,664)	4,338	(171)	4,167
Defined benefit plan actuarial gains (losses)	(340)	94	(246)	1,736	(307)	1,429
Total	**(2,741)**	**(1)**	**(2,742)**	**3,967**	**(508)**	**3,459**

	Separate financial statements					
	2023			2022		
Income tax	Before Tax	Tax (expense) benefit	Net of tax	Before tax	Tax (expense) benefit	Net of tax
	(in million Baht)					
Recognized in other comprehensive income						
Net investment hedge	-	-	-	-	-	-
Cash flow hedges reserve	(18)	4	(14)	80	(16)	64
Total	**(18)**	**4**	**(14)**	**80**	**(16)**	**64**

Reconciliation of effective tax rate	Consolidated financial statements			
	2023		2022	
	Rate (%)	*(in million Baht)*	*Rate (%)*	*(in million Baht)*
Profit (loss) before tax expense		(13,597)		40,104
Income tax using the Thai corporation tax rate	20.00	(2,719)	20.00	8,021
Income tax increase (reduction) - deferred - other countries		6		(363)
Effect of different tax rates in foreign jurisdictions		(1,108)		(711)
Income not subject to tax and tax privileges		(1,095)		(2,857)
Coupon payment on subordinated perpetual debentures recognized in equity		(150)		(150)
Expenses not deductible for tax purposes		1,219		3,161
Utilisation of previously unrecognized tax losses		(252)		(188)
Recognition of deferred tax assets from previously unrecognized tax losses		(6)		(2,491)
Current year losses for which no deferred tax asset was recognized		1,784		692
Under provided in prior years		425		390
Written-off unrecoverable deferred tax assets from loss carry forward		199		166
Share of profit of associate and joint ventures accounted for using equity method		(82)		(77)
Foreign exchange differences arising from transaction of intercompany loans considered as part of net investment in foreign operations		186		(89)
Change in recognition of temporary difference		(659)		(171)
Others		(432)		441
Total	**19.74**	**(2,684)**	**14.40**	**5,774**

Reconciliation of effective tax rate	Separate financial statements			
	2023		2022	
	Rate (%)	*(in million Baht)*	*Rate (%)*	*(in million Baht)*
Profit before tax expense		9,287		6,927
Income tax using the Thai corporation tax rate	20.00	1,857	20.00	1,385
Income not subject to tax		(1,617)		(2,187)
Coupon payment on subordinated perpetual debentures recognized in equity		(150)		(150)
Expenses not deductible for tax purposes		-		1,037
Change in recognition of temporary difference		(496)		-
Total	**(4.37)**	**(406)**	**1.23**	**85**

Deferred tax	Consolidated financial statements					
	Assets		Liabilities		Net	
At 31 December	2023	2022	2023	2022	2023	2022
	(in million Baht)					
Property, plant and equipment	(3,727)	(1,666)	33,322	31,799	29,595	30,133
Right-of-use assets	(144)	(140)	-	-	(144)	(140)
Intangible assets	(2,646)	(2,534)	4,269	4,442	1,623	1,908
Trade accounts receivable	(44)	(32)	4	4	(40)	(28)
Derivatives	(950)	(1,204)	579	637	(371)	(567)
Inventories	(509)	(1,243)	100	22	(409)	(1,221)
Provisions	(3,684)	(2,285)	375	386	(3,309)	(1,899)
Loss carry forward	(15,059)	(11,841)	-	-	(15,059)	(11,841)
Others	(3,830)	(2,797)	769	1,440	(3,061)	(1,357)
Total	(30,593)	(23,742)	39,418	38,730	8,825	14,988
Set off of tax	23,740	19,201	(23,740)	(19,201)	-	-
Net deferred tax (assets) liabilities	**(6,853)**	**(4,541)**	**15,678**	**19,529**	**8,825**	**14,988**

Deferred tax	Separate financial statements					
	Assets		Liabilities		Net	
At 31 December	2023	2022	2023	2022	2023	2022
	(in million Baht)					
Derivatives	-	-	167	171	167	171
Provisions	(3)	(3)	-	-	(3)	(3)
Investment	(496)	-	-	-	(496)	-
Total	(499)	(3)	167	171	(332)	168
Set off of tax	167	3	(167)	(3)	-	-
Net deferred tax (assets) liabilities	**(332)**	**-**	**-**	**168**	**(332)**	**168**

Net deferred tax (assets) liabilities	Consolidated financial statements				
	At 1 January 2023	Charged / (Credited to) : Profit or loss	Other comprehensive income	Exchange differences	**At 31 December 2023**
		(in million Baht)			
Property, plant and equipment	30,133	(375)	-	(163)	29,595
Right-of-use assets	(140)	(5)	-	1	(144)
Intangible assets	1,908	(311)	-	26	1,623
Trade accounts receivable	(28)	(13)	-	1	(40)
Derivatives	(567)	542	(288)	(58)	(371)

	Consolidated financial statements				
		Charged / (Credited to) :			
Net deferred tax (assets) liabilities	**At 1 January 2023**	Profit or loss	Other comprehensive income	Exchange differences	**At 31 December 2023**
Inventories	(1,221)	812	-	-	(409)
Provisions	(1,899)	(1,414)	-	4	(3,309)
Loss carry forward	(11,841)	(3,187)	-	(31)	(15,059)
Others	(1,357)	(1,971)	289	(22)	(3,061)
Total	**14,988**	**(5,922)**	**1**	**(242)**	**8,825**

	Consolidated financial statements					
		Charged / (Credited to)				
Net deferred tax (assets) liabilities	**At 1 January 2022**	Profit or loss	Other comprehensive income	Acquired through business combinations	Exchange differences	**At 31 December 2022**
			(in million Baht)			
Property, plant and equipment	26,944	1,533	-	1,261	395	30,133
Right-of-use assets	(101)	(36)	-	(2)	(1)	(140)
Intangible assets	2,844	(997)	-	117	(56)	1,908
Trade accounts receivable	(12)	(16)	-	-	-	(28)
Derivatives	223	539	201	(1,622)	92	(567)
Inventories	(370)	(859)	-	(2)	10	(1,221)
Provisions	(693)	(812)	-	(438)	44	(1,899)
Loss carry forward	(9,272)	(1,457)	-	(1,107)	(5)	(11,841)
Others	(2,318)	743	307	(67)	(22)	(1,357)
Total	**17,245**	**(1,362)**	**508**	**(1,860)**	**457**	**14,988**

	Separate financial statements			
		Charged / (Credited to) :		
Net deferred tax (assets) liabilities	**At 1 January 2023**	Profit or loss	Other comprehensive income	**At 31 December 2023**
		(in million Baht)		
Derivatives	171	-	(4)	167
Provisions	(3)	-	-	(3)
Investment	-	(496)	-	(496)
Total	**168**	**(496)**	**(4)**	**(332)**

	Separate financial statements			
		Charged / (Credited to) :		
Net deferred tax (assets) liabilities	**At 1 January 2022**	Profit or loss	Other comprehensive income	**At 31 December 2022**
		(in million Baht)		
Derivatives	155	-	16	171
Provisions	(2)	(1)	-	(3)
Total	**153**	**(1)**	**16**	**168**

Unrecognized deferred tax assets	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in million Baht)			
Deductible temporary differences	-	3	-	-
Tax losses	3,414	3,947	-	-
Total	**3,414**	**3,950**	**-**	**-**

The tax losses expire from 2023 onward. The deductible temporary differences do not expire under current tax legislation. The Group has not recognized these items as deferred tax assets because it is not probable that the Group will have sufficient future taxable profit to utilise the benefits therefrom.

29 Basic and diluted earnings per share

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht/thousand shares)			
Profit (loss) attributable to ordinary shareholders				
Profit (loss) for the year attributable to owner of the Company	(10,797,942)	31,006,084	9,693,339	6,841,873
Less: coupon payment on subordinated perpetual debentures	(750,000)	(750,000)	(750,000)	(750,000)
Profit (loss) attributable to ordinary shareholders of the Company	**(11,547,942)**	**30,256,084**	**8,943,339**	**6,091,873**
Weighted average number of ordinary shares outstanding at 31 December	**5,614,552**	**5,614,552**	**5,614,552**	**5,614,552**
Basic and diluted earnings (loss) per share *(in Baht)*	**(2.06)**	**5.39**	**1.59**	**1.09**

30 Dividends

	Approval date	Payment schedule	Dividend rate per share	Amount
			(in Baht)	*(in million Baht)*
2023				
2022 Annual dividend	25 April 2023	May 2023	**0.40**	**2,245.8**
2023 Interim dividend	15 May 2023	June 2023	**0.25**	**1,403.6**
2023 Interim dividend	15 August 2023	September 2023	**0.25**	**1,403.6**
2023 Interim dividend	16 November 2023	December 2023	**0.25**	**1,403.6**
2022				
2021 Annual dividend	26 April 2022	May 2022	**0.25**	**1,403.6**
2022 Interim dividend	18 May 2022	June 2022	**0.40**	**2,245.8**
2022 Interim dividend	17 August 2022	September 2022	**0.40**	**2,245.8**
2022 Interim dividend	16 November 2022	December 2022	**0.40**	**2,245.8**

31 Financial instruments

(a) Carrying amounts and fair values

The following tables show the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy, but does not include fair value information for financial assets and financial liabilities measured at amortized cost if the carrying amount is a reasonable approximation of fair value.

	Consolidated financial statements								
	Carrying amount					Fair value			
At 31 December	Hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortized cost	Total	Level 1	Level 2	Level 3	Total
					(in million Baht)				
2023									
Financial assets									
Other financial assets:									
Interest rate swaps	1,538	-	-	-	1,538	-	1,538	-	1,538
Forward exchange contracts	142	402	-	-	544	-	544	-	544
Cross currency swaps	861	-	-	-	861	-	861	-	861
Commodity derivatives	48	-	-	-	48	-	48	-	48
Total other financial assets	**2,589**	**402**	**-**	**-**	**2,991**				
Financial liabilities									
Other financial liabilities:									
Interest rate swaps	14	-	-	-	14	-	14	-	14
Forward exchange contracts	1,161	147	-	-	1,308	-	1,308	-	1,308
Commodity derivatives	801	61	-	-	862	-	862	-	862
Total other financial liabilities	**1,976**	**208**	**-**	**-**	**2,184**				

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

	Consolidated financial statements								
	Carrying amount					Fair value			
At 31 December	Hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortized cost	Total	Level 1	Level 2	Level 3	Total
					(in million Baht)				
2022									
Financial assets									
Other financial assets:									
Interest rate swaps	3,522	-	-	-	3,522	-	3,522	-	3,522
Forward exchange contracts	650	281	-	-	931	-	931	-	931
Cross currency swaps	3,296	-	-	-	3,296	-	3,296	-	3,296
Commodity derivatives	207	42	-	-	249	-	249	-	249
Total other financial assets	**7,675**	**323**	**-**	**-**	**7,998**				
Financial liabilities									
Other financial liabilities:									
Forward exchange contracts	1,514	250	-	-	1,764	-	1,764	-	1,764
Commodity derivatives	975	29	-	-	1,004	-	1,004	-	1,004
Total other financial liabilities	**2,489**	**279**	**-**	**-**	**2,768**				

NOTES TO THE FINANCIAL STATEMENTS

Indorama Ventures Public Company Limited and its Subsidiaries
For the year ended 31 December 2023

	Separate financial statements								
	Carrying amount					Fair value			
At 31 December	Hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortized cost	Total	Level 1	Level 2	Level 3	Total
					(in million Baht)				
2023									
Financial assets									
Other financial asset:									
Forward exchange contracts	-	28	-	-	28	-	28	-	28
Total other financial assets	**-**	**28**	**-**	**-**	**28**				
2022									
Financial assets									
Other financial asset:									
Interest rate swaps	19	-	-	-	19	-	19	-	19
Forward exchange contracts	-	25	-	-	25	-	25	-	25
Total other financial assets	**19**	**25**	**-**	**-**	**44**				

The following tables present valuation technique of financial instruments measured at fair value in the statements of financial position:

Type	Valuation technique
Forward exchange contracts	*Forward pricing:* The fair value is determined using quoted forward exchange rates at the reporting date and present value calculations based on high credit quality yield curves in the respective currencies.
Interest rate swaps	*Swap models:* The present value of estimated future cash flows, using an observable yield curve.
Commodity swaps/ Cross currency swap and other derivatives	*In cases where there is an active market*, the Group/Company uses the market value as the fair value of derivatives. *In cases where there is no active market,* simple over-the-counter derivative is derived by using a valuation technique incorporating observable market data.

(b) Financial risk management policies

Risk management framework

The Group's/Company's board of directors has overall responsibility for the establishment and oversight of the Group's/Company's risk management framework. The board of directors has established the risk management committee, which is responsible for developing and monitoring the Group's/Company's risk management policies. The committee reports regularly to the board of directors on its activities.

The Group's/Company's risk management policies are established to identify and analyze the risks faced by the Group/Company, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's/Company's activities. The Group/Company, through its training and management standards and procedures, aims to maintain a disciplined and constructive control environment in which all employees understand their roles and obligations.

(b.1) Credit risk

Credit risk is the risk of financial loss to the Group/Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's receivables from customers.

(b.1.1) Trade accounts receivables

The risk management committee has established a credit policy under which each new customer is analyzed individually for creditworthiness before the Group's commercial terms and conditions are offered. The Group's review includes external ratings, if they are available, financial statements, credit agency information, industry information and in some cases bank references. Sale limits are established for each customer and reviewed periodically. Any sales exceeding those limits require approval from the risk management committee.

The Group limits its exposure to credit risk from trade accounts receivables by establishing a maximum payment period of 12 months. Outstanding trade receivables are regularly monitored by the Group. An impairment analysis is performed by the Group at each reporting date. The provision rates of expected credit loss are based on days past due for groupings of various customers with similar credit risk to reflect differences between economic conditions in the past, current conditions and the Group's view of economic conditions over the expected lives of the receivables.

Information relevant to trade accounts receivable is disclosed in note 7.

(b.1.2) Cash and cash equivalent and derivatives

The Group's/Company's exposure to credit risk arising from cash and cash equivalents and derivative assets is limited because the counterparties are banks and financial institutions which the Group/Company considers to have low credit risk.

(b.1.3) Guarantees

The Group's/Company's policy is to provide financial guarantees for subsidiaries' liabilities. At 31 December 2023, the Group/Company has issued a guarantee to certain banks in respect of credit facilities granted to subsidiaries (see note 5).

(b.2) Liquidity risk

At 31 December 2023, the Group's current liabilities exceeded current assets. To ensure funding needs and mitigate liquidity risks for the foreseeable future, the management continually monitors the Group liquidity risk and implements procedures, including maintaining a sufficient level of cash and cash equivalents deemed adequate to finance the Group's operations, rolling forecasting the Group's unutilized credit facilities, and rollover of the short-term borrowing.

The following table shows the remaining contractual maturities of financial liabilities at the reporting date. The amounts are gross and undiscounted and include contractual interest payments and exclude the impact of netting agreements.

	Consolidated financial statements				
		Contractual cash flows			
At 31 December	Carrying amount	1 year or less	More than 1 year but less than 5 years	More than 5 years	Total
			(in thousand Baht)		
2023					
Non-derivative financial liabilities					
Bank overdrafts	2,684,447	2,684,447	-	-	2,684,447
Trade accounts payable	101,934,941	101,934,941	-	-	101,934,941
Short-term loans from financial institutions	25,734,796	25,734,796	-	-	25,734,796
Long-term loans from financial institutions	126,287,620	22,977,568	94,372,701	8,937,351	126,287,620
Lease liabilities	13,553,065	2,448,411	5,918,396	5,186,258	13,553,065
Debentures	86,072,082	15,558,225	37,767,684	32,746,173	86,072,082
Interest payable	1,351,491	10,903,650	20,113,530	3,958,722	34,975,902
	357,618,442	**182,242,038**	**158,172,311**	**50,828,504**	**391,242,853**
Derivative financial liabilities					
Interest rate swaps:	14,471				
- Cash outflow		80,458	79,085	82,337	241,880
- Cash inflow		(105,532)	(103,731)	(107,998)	(317,261)
Forward exchange contracts:	1,307,410				
- Cash outflow		24,118,361	14,964,008	-	39,082,369
- Cash inflow		(22,414,867)	(14,249,000)	-	(36,663,867)
Commodity derivatives	862,319	862,319	-	-	862,319
	2,184,200	**2,540,739**	**690,362**	**(25,661)**	**3,205,440**

	Consolidated financial statements				
		Contractual cash flows			
At 31 December	Carrying amount	1 year or less	More than 1 year but less than 5 years	More than 5 years	Total
			(in thousand Baht)		
2022					
Non-derivative financial liabilities					
Bank overdrafts	3,751,811	3,751,811	-	-	3,751,811
Trade accounts payable	106,720,741	106,720,741	-	-	106,720,741
Short-term loans from financial institutions	27,496,014	27,496,014	-	-	27,496,014
Long-term loans from financial institutions	130,966,091	28,501,962	92,948,583	9,515,546	130,966,091
Lease liabilities	10,900,286	2,254,915	4,300,981	4,344,390	10,900,286
Debentures	81,199,128	5,274,945	40,730,451	35,193,732	81,199,128
Interest payable	1,102,320	8,759,916	15,054,528	4,549,181	28,363,625
	362,136,391	**182,760,304**	**153,034,543**	**53,602,849**	**389,397,696**
Derivative financial liabilities					
Forward exchange contracts:	1,764,263				
- Cash outflow		12,814,139	35,471,759	-	48,285,898
- Cash inflow		(12,647,651)	(32,838,250)	-	(45,485,901)
Commodity derivatives	1,003,403	1,003,403	-	-	1,003,403
	2,767,666	**1,169,891**	**2,633,509**	**-**	**3,803,400**

	Separate financial statements				
		Contractual cash flows			
At 31 December	Carrying amount	1 year or less	More than 1 year but less than 5 years	More than 5 years	Total
			(in thousand Baht)		
2023					
Non-derivative financial liabilities					
Long-term loans from related party	12,500,000	-	12,500,000	-	12,500,000
Debentures	69,252,960	4,159,098	32,347,689	32,746,173	69,252,960
Interest payable	399,400	2,272,285	7,739,293	3,737,892	13,749,470
	82,152,360	**6,431,383**	**52,586,982**	**36,484,065**	**95,502,430**
2022					
Non-derivative financial liabilities					
Long-term loans from financial institutions	2,536,088	2,536,088	-	-	2,536,088
Long-term loans from related party	8,000,000	-	8,000,000	-	8,000,000
Debentures	63,355,283	4,086,621	24,074,930	35,193,732	63,355,283
Interest payable	388,445	2,500,050	7,538,811	4,306,956	14,345,817
	74,279,816	**9,122,759**	**39,613,741**	**39,500,688**	**88,237,188**

The cash inflows/cash outflows disclosed in the above table represent the contractual undiscounted cash flows relating to derivative financial liabilities held for risk management purposes and which are not usually closed out before contractual maturity. The disclosure shows net cash flow amounts for derivatives that are net cash-settled and gross cash inflow and outflow amounts for derivatives that have simultaneous gross cash settlement.

(b.3) Market risk

The Group/Company is exposed to the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk is as follows:

Interest rate benchmark transition

During 2023, the Group has amended all financial contracts previously referencing from LIBOR rate to other alternative benchmark rate. The transition of reference interest rate took place automatically following the cessation in LIBOR publication.

(b.3.1) Foreign currency risk

The Group/Company is exposed to foreign currency risk relating to purchases, sales, lendings and borrowings which are denominated in foreign currencies. The Group/Company primarily utilizes forward exchange contracts with maturities of less than one year to hedge such financial assets and liabilities denominated in foreign currencies. The forward exchange contracts entered into at the reporting date also relate to anticipated purchases and sales denominated in foreign currencies, for the subsequent period.

Exposure to foreign currency at 31 December	**Consolidated financial statements**		**Separate financial statements**	
	2023	2022	2023	2022
	(in thousand Baht)			
United States Dollars				
Cash and cash equivalents	1,378,317	1,349,816	-	1,174
Trade accounts receivable	7,915,981	7,816,018	-	-
Short-term loans to related parties	-	-	-	3,080,159
Interest-bearing liabilities	(70,636,522)	(81,611,774)	-	(2,536,088)
Trade accounts payable	(14,620,797)	(24,054,482)	-	-
Net statement of financial position exposure	**(75,963,021)**	**(96,500,422)**	**-**	**545,245**
Forward exchange purchase contracts	3,857,586	2,633,035	-	-
Forward exchange selling contracts	(2,863,606)	(3,295,170)	-	-
Net exposure	**(74,969,041)**	**(97,162,557)**	**-**	**545,245**
Euro				
Cash and cash equivalents	670,578	226,702	-	-
Trade accounts receivable	2,027,518	2,792,844	-	-
Interest-bearing liabilities	(3,663,576)	(9,147,189)	-	-
Trade accounts payable	(1,276,267)	(1,234,259)	-	-
Net statement of financial position exposure	**(2,241,747)**	**(7,361,902)**	**-**	**-**
Forward exchange purchase contracts	34,865	67,364	-	-
Forward exchange selling contracts	(1,666,187)	(1,430,194)	-	-
Net exposure	**(3,873,069)**	**(8,724,732)**	**-**	**-**

Exposure to foreign currency at 31 December	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Pounds Sterling				
Cash and cash equivalents	12,563	42,453	-	-
Trade accounts receivable	9,196	33,553	-	-
Other long-term investment	217,884	-	-	-
Trade accounts payable	(13,673)	(9,096)	-	-
Net statement of financial position exposure	**225,970**	**66,910**	**-**	**-**
Forward exchange selling contracts	-	(13,390)	-	-
Net exposure	**225,970**	**53,520**	**-**	**-**
Nigerian Naira				
Cash and cash equivalents	51,233	-	-	-
Trade accounts receivable	617,982	-	-	-
Other long-term investment	10,221	-	-	-
Interest-bearing liabilities	(44,091)	-	-	-
Trade accounts payable	(79,052)	-	-	-
Net statement of financial position exposure	**556,293**	**-**	**-**	**-**
Chinese Yuan				
Cash and cash equivalents	229,786	513,419	-	-
Trade accounts receivable	580,866	431,074	-	-
Interest-bearing liabilities	(9,757)	(39,710)	-	-
Trade accounts payable	(249,648)	(259,713)	-	-
Net statement of financial position exposure	**551,247**	**645,070**	**-**	**-**
Mexican Peso				
Cash and cash equivalents	216,848	104,052	-	-
Trade accounts receivable	824,331	1,027,481	-	-
Interest-bearing liabilities	(5,092)	(226,509)	-	-
Trade accounts payable	(1,112,373)	(334,284)	-	-
Net statement of financial position exposure	**(76,286)**	**570,740**	**-**	**-**
Forward exchange purchase contracts	-	93,318	-	-
Net exposure	**(76,286)**	**664,058**	**-**	**-**

Exposure to foreign currency at 31 December	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Indonesian Rupiah				
Cash and cash equivalents	75,662	60,776	-	-
Trade accounts receivable	1,005,898	847,422	-	-
Interest-bearing liabilities	(31,382)	(6,924)	-	-
Trade accounts payable	(3,114,137)	(4,780,159)	-	-
Net statement of financial position exposure	**(2,063,959)**	**(3,878,885)**	**-**	**-**
Forward exchange purchase contracts	2,310,073	3,739,652	-	-
Forward exchange selling contracts	(545,703)	(747,736)	-	-
Net exposure	**(299,589)**	**(886,969)**	**-**	**-**
Singapore Dollars				
Cash and cash equivalents	3,663	8,204	-	-
Other long-term investment	472,632	-	-	-
Interest-bearing liabilities	(5,052,197)	(4,764,846)	-	-
Trade accounts payable	(2,658)	(25)	-	-
Net statement of financial position exposure	**(4,578,560)**	**(4,756,667)**	**-**	**-**
Currency swaps contracts	5,055,209	4,769,611	-	-
Net exposure	**476,649**	**12,944**	**-**	**-**
Danish Krone				
Cash and cash equivalents	145,953	135,164	-	-
Trade accounts receivable	172,871	120,772	-	-
Trade accounts payable	(159,271)	(206,011)	-	-
Net statement of financial position exposure	**159,553**	**49,925**	**-**	**-**
Indian Rupee				
Cash and cash equivalents	128,919	44,551	-	-
Trade accounts receivable	42,642	49,804	-	-
Other long-term investment	4,757	-	-	-
Trade accounts payable	(27,110)	(6,573)	-	-
Net statement of financial position exposure	**149,208**	**87,782**	**-**	**-**
Czech Koruna				
Cash and cash equivalents	2,161	1,662	-	-
Trade accounts receivable	2,548	8,523	-	-
Trade accounts payable	(46,761)	(123,248)	-	-
Net statement of financial position exposure	**(42,052)**	**(113,063)**	**-**	**-**
Forward exchange purchase contracts	46,761	121,810	-	-
Net exposure	**4,709**	**8,747**	**-**	**-**

Exposure to foreign currency at 31 December	Consolidated financial statements 2023	Consolidated financial statements 2022	Separate financial statements 2023	Separate financial statements 2022
		(in thousand Baht)		
Egyptian Pound				
Cash and cash equivalents	28,847	1,718	-	-
Other investment	-	247,921	-	-
Interest-bearing liabilities	-	(229)	-	-
Trade accounts payable	(23,924)	(16,342)	-	-
Net statement of financial position exposure	**4,923**	**233,068**	**-**	**-**
Brazilian Real				
Cash and cash equivalents	119,122	149,428	-	-
Trade accounts receivable	57,637	63,152	-	-
Trade accounts payable	(52,547)	(173,057)	-	-
Net statement of financial position exposure	**124,212**	**39,523**	**-**	**-**
Israeli New Shekels				
Cash and cash equivalents	47,091	165,796	-	-
Trade accounts receivable	101,575	94,044	-	-
Interest-bearing liabilities	(1,120,300)	(1,992,759)	-	-
Trade accounts payable	(35,250)	(29,240)	-	-
Net statement of financial position exposure	**(1,006,884)**	**(1,762,159)**	**-**	**-**
Currency swaps contracts	393,739	818,471	-	-
Forward exchange selling contracts	(34,223)	-	-	-
Net exposure	**(647,368)**	**(943,688)**	**-**	**-**
Russian Ruble				
Cash and cash equivalents	183,813	119,067	-	-
Trade accounts receivable	429,776	595,268	-	-
Trade accounts payable	(16,153)	(6,048)	-	-
Net statement of financial position exposure	**597,436**	**708,287**	**-**	**-**
Canadian Dollar				
Cash and cash equivalents	7,663	-	-	-
Trade accounts receivable	297	154	-	-
Interest-bearing liabilities	(80,289)	(105,133)	-	-
Trade accounts payable	(175,117)	(125,079)	-	-
Net statement of financial position exposure	**(247,446)**	**(230,058)**	**-**	**-**

Sensitivity analysis

A reasonably possible strengthening (weakening) of the respective functional currencies of each entity in the Group against US dollar and Euro at the reporting date would have affected the measurement of financial instruments denominated in a US dollar and Euro and affected equity and profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular interest rates, remain constant.

		Consolidated financial statements			
		Profit or loss		Equity, net of tax	
	Movement	Strengthening	Weakening	Strengthening	Weakening
	(%)	*(in thousand Baht)*			
2023					
USD	1	749,690	(749,690)	250,657	(26,541)
EUR	1	38,731	(38,731)	307,530	(211,694)
2022					
USD	1	971,626	(971,626)	205,700	(166,269)
EUR	1	87,247	(87,247)	276,335	(292,771)

		Separate financial statements			
		Profit or loss		Equity, net of tax	
	Movement	Strengthening	Weakening	Strengthening	Weakening
	(%)	*(in thousand Baht)*			
2023					
USD	1	-	-	-	-
2022					
USD	1	(5,452)	5,452	-	-

(b.3.2) Interest rate risk

Interest rate risk is the risk that future movements in market interest rates will affect the results of the Group's/Company's operations and its cash flows because loan interest rates are mainly variable. So the Group/Company is primarily exposed to interest rate risk. The Group/Company mitigates this risk by ensuring that at least 50% of its interest rate risk exposure is at a fixed rate. This is achieved partly by entering fixed-rate instruments and partly by borrowing at a floating rate and using interest rate swaps as hedges of the variability in cash flows attributable to movements in interest rates. The Group/Company applies a hedge ratio of 1:1.

Exposure to interest rate risk	**Consolidated financial statements**		**Separate financial statements**	
At 31 December	2023	2022	2023	2022
	(in thousand Baht)			
Financial instruments with variable interest rates				
Financial assets	367,906	23,694	-	-
Financial liabilities	(135,475,475)	(148,001,687)	-	(2,537,282)
Net statement of financial position exposure	**(135,107,569)**	**(147,977,993)**	-	**(2,537,282)**
Interest rate swaps	52,472,308	70,792,389	-	1,460,261
Net exposure	**(82,635,261)**	**(77,185,604)**	-	**(1,077,021)**

Interest rate swap contract

The Group/Company has entered into interest rate swap agreements for long-term loans swapping floating interest rates ranging from 3.91 to 5.62 percent per annum *(2022 : 2.13 to 4.77 percent per annum)* to fixed interest rates ranging from (0.30) to 4.10 percent per annum *(2022 : (0.30) to 3.33 percent per annum)*, with monthly and quarterly settlement starting on January 2020 until March 2028.

Cash flow sensitivity analysis for variable-rate instruments

A reasonable possible change of 1% in interest rates at the reporting date would have increased (decreased) equity and profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency exchange rates, remain constant.

	Consolidated financial statements			
	Profit or loss		Equity, net of tax	
	1% increase in interest rate	1% decrease in interest rate	1% increase in interest rate	1% decrease in interest rate
	(in thousand Baht)			
2023				
Financial instruments with variable interest rate	(1,351,076)	1,351,076	-	-
Interest rate swaps	(1,027)	1,038	113,502	(114,262)
Cash flow sensitivity (net)	**(1,352,103)**	**1,352,114**	**113,502**	**(114,262)**
2022				
Financial instruments with variable interest rate	(1,479,780)	1,479,780	-	-
Interest rate swaps	-	-	912,281	(916,499)
Cash flow sensitivity (net)	**(1,479,780)**	**1,479,780**	**912,281**	**(916,499)**

	Separate financial statements			
	Profit or loss		Equity, net of tax	
	1% increase in interest rate	1% decrease in interest rate	1% increase in interest rate	1% decrease in interest rate
	(in thousand Baht)			
2023				
Financial instruments with variable interest rate	-	-	-	-
Interest rate swaps	-	-	-	-
Cash flow sensitivity (net)	**-**	**-**	**-**	**-**
2022				
Financial instruments with variable interest rate	(25,373)	25,373	-	-
Interest rate swaps	-	-	2,848	(2,877)
Cash flow sensitivity (net)	**(25,373)**	**25,373**	**2,848**	**(2,877)**

(c) Hedge accounting

(c.1) Cash flow hedges

The amounts at the reporting date relating to items designated as hedged items were as follows.

	Consolidated financial statements	
At 31 December	Cash flow hedge reserve	Balance remaining in the cash flow hedge reserve from hedging relationships for which hedge accounting is no longer applied
	(in thousand Baht)	
2023		
Foreign currency risk		
Receivables, loan assets, payables, and borrowings	1,487,684	956,874
Interest rate risk		
Variable-rate instrument	1,221,051	-
Commodity price risk		
Raw material purchases forecast	(282,218)	-
2022		
Foreign currency risk		
Receivables, loan assets, payables, and borrowings	2,774,030	-
Interest rate risk		
Variable-rate instrument	3,498,129	-
Commodity price risk		
Raw material purchases forecast	(938,445)	-

	Separate financial statements	
At 31 December	Cash flow hedge reserve	Balance remaining in the cash flow hedge reserve from hedging relationships for which hedge accounting is no longer applied
	(in thousand Baht)	
2023		
Interest rate risk		
Variable-rate instrument	-	-
2022		
Interest rate risk		
Variable-rate instrument	18,470	-

The amounts relating to items designated as hedging instruments and hedge ineffectiveness were as follows.

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Foreign currency risk				
At 31 December				
Cross-currency swaps - nominal amount	11,361,663	28,508,109	-	-
Foreign currency forwards - nominal amount	945,242	824,379	-	-
Carrying amount included in:				
- other current financial assets	37,718	156,546	-	-
- other non-current financial assets	834,705	3,139,701	-	-
- other current financial liabilities	3,688	9,739	-	-
Year ended 31 December				
Recognized in other comprehensive income				
- changes in value of the hedging instrument	(1,286,345)	2,515,719	-	-
Interest rate risk				
At 31 December				
Interest rate swap contracts - nominal amount	52,472,308	70,792,389	-	1,460,261
Carrying amount included in:				
- other current financial assets	533,897	625,681	-	18,470
- other non-current financial assets	1,004,109	2,896,013	-	-
- other non-current financial liabilities	14,417	-	-	-
Year ended 31 December				
Recognized in other comprehensive income				
- changes in value of the hedging instrument	(2,258,610)	3,264,069	-	80,468
- hedging reserve transferred to finance costs	(18,470)	-	(18,470)	-
Recognized in profit or loss				
- hedge ineffectiveness included in finance costs	(277,006)	-	-	-
Commodity price risk				
At 31 December				
Commodity swap contracts - nominal amount (thousand metric tons)	63	13	-	-
Commodity swap contracts - nominal amount (thousand cubic meter)	-	25,185	-	-
Commodity swap contracts - nominal amount (billion BTU)	16,823	17,431	-	-
Commodity swap contracts - nominal amount (thousand megawatt hours)	478	468	-	-
Commodity swap contracts - nominal amount (thousand barrel)	-	1,290	-	-
Carrying amount included in:				
- other current financial assets	47,586	206,914	-	-
- other current financial liabilities	800,879	975,180	-	-

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Year ended 31 December				
Recognized in other comprehensive income				
- changes in value of the hedging instrument	1,030,849	(1,471,514)	-	-
- hedging reserve transferred to cost of sales of goods	(374,623)	41,283	-	-
Recognized in profit or loss				
- hedge ineffectiveness included in cost of sales of goods	706,555	(235,738)	-	-

The following table provides a reconciliation by risk category of components of equity and analysis of other comprehensive income items, net of tax, resulting from cash flow hedge accounting.

Cash flow hedges	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Hedging reserve				
Balance at 1 January	4,988,026	812,566	14,776	(49,598)
Changes in fair value:				
Foreign currency risk	(1,286,345)	2,515,719	-	-
Interest rate risk	(2,258,610)	3,264,069	-	80,468
Commodity price risk	1,030,849	(1,471,514)	-	-
Amount reclassified to profit or loss:				
Interest rate risk	(18,470)	-	(18,470)	-
Commodity price risk	(374,623)	41,283	-	-
Tax on movements on reserve during the year	254,842	(174,097)	3,694	(16,094)
Balance at 31 December	**2,335,669**	**4,988,026**	**-**	**14,776**

(c.2) Net investment hedges

A foreign currency exposure arises from the Group's/Company's net investment in its oversea subsidiaries that have EUR, USD, and AUD functional currency. The risk arises from the fluctuation in spot exchange rates between the EUR, USD, AUD and THB, which causes the amount of the net investment to vary.

The hedged risk in the net investment hedge is the risk of a weakening EUR, USD, AUD against THB that will result in a reduction in the carrying amount of the Group's/Company's net investment in the subsidiaries.

Part of the Group's/Company's net investment in its oversea subsidiaries is hedged by EUR, USD, and AUD long term foreign forward contracts and unsecured USD bank loans which mitigates the foreign currency risk arising from the subsidiary's net assets. The long term forwards contract, unsecured bank loans and the non-current liabilities are designated as hedging instruments for the changes in the value of the net investment that is attributable to changes in the spot rate of THB/EUR, THB/USD and THB/AUD respectively.

To assess hedge effectiveness, the Group/Company determines the economic relationship between the hedging instrument and the hedged item by comparing changes in the fair value of forward contracts and the carrying amount of the unsecured bank loans and the non-current liabilities that are attributable to changes in the spot rates with changes in the investments in the foreign operation due to movements in the spot rate (the offset method). The Group's/Company's policy is to hedge the net investment only to the extent of the cost of the investment.

The amounts related to items designated as hedged items were as follows.

	Consolidated financial statements	
	Foreign currency translation reserve	Balance remaining in the foreign currency translation reserve from hedging relationships for which hedge accounting is no longer applied
	(in thousand Baht)	
2023		
EUR net investment	970,843	1,041,496
USD net investment	(3,652,255)	(2,390,927)
AUD net investment	12,784	-
2022		
EUR net investment	1,315,447	790,018
USD net investment	(4,528,731)	(1,106,166)
AUD net investment	26,203	-

	Separate financial statements	
	Foreign currency translation reserve	Balance remaining in the foreign currency translation reserve from hedging relationships for which hedge accounting is no longer applied
	(in thousand Baht)	
2023		
EUR net investment	836,711	836,711
2022		
EUR net investment	836,711	836,711

The amounts related to items designated as hedging instruments were as follows.

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Net investment risk				
At 31 December				
Foreign exchange - nominal amount				
- forward contracts (USD)	32,854,368	42,684,564	-	-
- forward contracts (EUR)	7,036,179	11,048,220	-	-
- forward contracts (AUD)	469,190	467,582	-	-
- long-term loans (USD)	12,553,534	16,666,859	-	-
- non-current liabilities (USD)	5,071,103	4,876,875	-	-

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in thousand Baht)			
Carrying amount included in:				
- other current financial assets	12,784	-	-	-
- other non-current financial assets	117,780	649,773	-	-
- other current financial liabilities	850,619	878,926	-	-
- other non-current financial liabilities	306,871	625,544	-	-
Year ended 31 December				
Recognized in other comprehensive income				
- changes in value of the hedging instrument	518,302	(2,106,888)	-	-

32 Capital management

The Board of Directors' policy is to maintain a strong capital base so as to maintain investor, creditor, and market confidence and to sustain future development of the business. The Board of Directors regularly monitors the return on capital by evaluating results from operating activities divided by total shareholders' equity, excluding non-controlling interests and also monitors the level of dividends to ordinary shareholders.

33 Commitments with non-related parties

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
	(in million Baht)			
Capital commitments				
Machinery and equipment	2,408	4,733	-	-
Buildings and other construction	680	4,177	-	-
Others	1,056	266	-	-
Total	**4,144**	**9,176**	**-**	**-**

34 Events after the reporting period

On 23 February 2024, the board of directors proposed for the dividend payment of Baht 0.175 per share, amounting to Baht 982.5 million. This dividend payment is subject to the approval by the shareholders of the Company.

REPORT OF THE BOARD OF DIRECTORS' RESPONSIBILITIES FOR THE FINANCIAL STATEMENTS

The Board of Directors of Indorama Ventures Public Company Limited places great importance on its duties and responsibilities in supervising the Company's operations in compliance with good corporate governance principles and is accountable for the financial statements, including the financial data shown in the Annual Registration Statement / Annual Report 2023 (Form 56-1 One Report). The financial statements for the accounting year ended December 31, 2023 were prepared under generally accepted accounting standards. In preparing the said financial statements, the Company has adopted accounting practices and standards that are appropriate to its nature of business. All material information has been sufficiently disclosed in the notes to financial statements. The financial statements have been audited by qualified and independent auditors who have confirmed that the said statements accurately reflect the actual financial standing, results and operating results over the past year, as well as being transparent.

The Board of Directors has maintained internal control, internal audit, risk management and corporate governance in order to ensure the completeness, adequacy, accuracy and fairness of the financial statements. The Board of Directors has assigned the Audit Committee to review the quality of the financial reports, the internal control system as well as the appropriate disclosure of connected transactions.

The Board of Directors expresses its satisfaction on the adequacy, credibility and reliability on the internal control system and the financial statements of Indorama Ventures Public Company Limited and its subsidiary companies for the year ended December 31, 2023.

Mr. Sri Prakash Lohia
Chairman

Mr. Aloke Lohia
Group CEO

INDORAMA VENTURES

100 BILLION PET BOTTLES RECYCLED

Thank you for recycling every day and helping us achieve this milestone.

Indorama Ventures celebrates recycling 100 billion PET bottles since 2011, building on our global recycling leadership.

As a Thailand-based multinational company, we are investing $1.5 billion by 2030 to accelerate the expansion of our recycling capacity.

•In nine years, we recycled 50 billion PET bottles.
•Now, in just three and a half years, we have achieved 100 billion.

As a fully recyclable material, approved by FDAs around the world, PET is key in building the circular economy. And increased recycling means a greener planet.

Please continue recycling every day and spread the word!
Together we can create a better world.

The 100 billion PET bottles figure uses the average weight of on-the-go PET water and soda bottles*, equivalent to the volume recycled at Indorama Ventures recycling sites between February 2011 – September 2023.
** Weighting reference: The International Bottled Water Association*

PET, made to be remade.

www.indoramaventures.com

APPENDIX

Appendix 1	Details of Company's Directors, Executives, the person assigned to take direct responsibility for accounting supervision and Company Secretary
Appendix 2	Details of Directorship Information in Major Subsidiaries and/or Associated Companies
Appendix 3	Details of Head of Internal Audit, and Company Secretary and Head of Corporate Compliance
Appendix 4	Business Assets and Information on Appraisal Report
Appendix 5	The Audit Committee Report, the Sustainability and Risk Management Committee Report (SRMC) and the Nomination Compensation and Corporate Governance Committee Report (NCCG)
Appendix 6	Board of Directors Charter, Audit Committee Charter, Nomination, Compensation and Corporate Governance Committee Charter, Sustainability and Risk Management Committee Charter, and Qualifications of Independent Directors
Appendix 7	Roles and Responsibilities of: (a) the Chairman of the Board, (b) the Lead Independent Director; (c) the Board of Directors; (d) the Group Chief Executive Officer (Group CEO); and (f) the Company Secretary
Appendix 8	Corporate Governance Manual
Appendix 9	Investment in Subsidiaries

Please find more details of the Company's information from the appendixes as shown on the Company's website www.indoramaventures.com*

* In case this Form 56-1 One Report references the information which has been disclosed on the Company's website, the disclosed information on the website shall be deemed as part of this Form 56-1 One Report. The Board of Directors certifies the accuracy and completeness of the referenced and disclosed information as same as information disclosed in this Form 56-1 One Report.

Indorama Ventures Public Company Limited

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This annual report is printed on paper that requires 50% fewer trees to produce than normal paper. All the text is printed using natural soy ink.