

INDORAMA

FOSTERING A SUSTAINABLE FUTURE

ESG FACTBOOK 2023





About ESG Factbook

Indorama Corporation Pte Ltd. ESG Factbook outlines our performance on key ESG indicators required by the global reporting standards including GRI (Global Reporting Initiative), SASB (Sustainability Accounting Standards Board), and European Union ESRS (European Sustainability Reporting Standards).

We conform to the aforementioned standards for the preparation of our sustainability report, which is available on our website at www.indorama.com.

The ESG Factbook is a supplement to our Sustainability Report 2023.



[Click here](#) to download ESG Factbook 2023

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Scope and Boundary

Operational entities covered in 2023 Sustainability Report

S. No.	Company Name	Business	Country
Asia			
1	Indorama Corporation Pte Ltd.	Corporate	Singapore
2	PT. Indo-Rama Synthetics Tbk.	Fiber, PET, Spun Yarn, Weaving, Polyester	Indonesia
3	PT. Medisafe Technologies	Medical Gloves	Indonesia
4	YTY Industry Holdings Sdn. Bhd.	Medical Gloves	Malaysia
5	Indorama India Private Limited, Spandex division, Baddi	Spandex Yarn	India
6	Indorama India Private Limited, Fertilizer division, Haldia	Fertilizers	India
7	Indorama India Private Limited, Fertilizer division, Jagdishpur	Fertilizers	India
8	F.E. Indorama Agro LLC	Cotton Fibers	Uzbekistan
9	Indorama Kokand Textile JSC	Spun Yarn	Uzbekistan
10	JSC Indorama Kokand Fertilizers & Chemicals	Fertilizers	Uzbekistan
11	JSC Fergana Azot*	Fertilizers	Uzbekistan
Europe			
12	Indorama Iplik San. Ve.Tic. A.S	Spun Yarn	Turkey
13	JSC Rustavi Azot	Fertilizers	Georgia
Africa			
14	Indorama Eleme Petrochemicals Limited	Petrochemical	Nigeria
15	Indorama Eleme Fertilizer & Chemicals Limited	Fertilizers	Nigeria
16	TAK Agro & Chemicals Limited*	Fertilizers (Blending)	Nigeria
17	Industries Chimiques Du Senegal	Fertilizers	Senegal
South America			
18	Adufertil Fertilizantes LTDA	Fertilizers (Blending and Distribution)	Brazil
19	Adfert Aditivos Industria E Comercio LTDA	Fertilizers	Brazil

*Not part of the reporting boundary in 2023

Material Topics

Sustainability meets Chemistry



Climate Change

- Climate Strategy
- GHG Emissions
- Energy

Toxic Emissions & Waste

- Air Emissions
- Waste
- Effluents
- Plastic Waste
- Packaging
- Circular Economy

Water

- Water Stewardship

Biodiversity & Land Use

- Biodiversity
- Land Use
- Deforestation
- Soil
- Regenerative Agriculture
- Nutrient Stewardship

Empowering Talent



Occupational Health & Safety

- Occupational Health & Safety

Human Capital Development

- Employee Wellbeing
- Employee Engagement
- Learning and Development
- Employee diversity & inclusion (DEI)
- Talent Acquisition & Retention

Human Rights & Labor Management

- Human Rights
- Labor Management Relations
- Child Labor
- Forced or Compulsory Labor
- Non-Discrimination
- Freedom of Association and Collective Bargaining

Building a Resilient Society



Communities

- Community Development
- Farmer Livelihoods

Responsible Supply Chain

- Supply Chain Management
- Responsible Sourcing

Food Safety, Quality and Security

- Food Safety and Quality
- Health and Nutrition
- Hunger and Food Security

Leading with Integrity



Corporate Governance

- Board composition and Oversight
- Anti-competitive behavior
- Transparency and Reporting
- Ethics and Integrity
- Anti-Corruption

Policy & Regulations

- Company Policies
- Regulatory Compliance
- Environmental Compliance

Product Stewardship

- Product Quality & Chemical Safety
- Sustainable Innovation & Technology
- Lifecycle Assessment
- Product Carbon Footprint
- Packaging

Digitalization & Cybersecurity

- Digitalization
- Cybersecurity
- Data Privacy

Risk Management

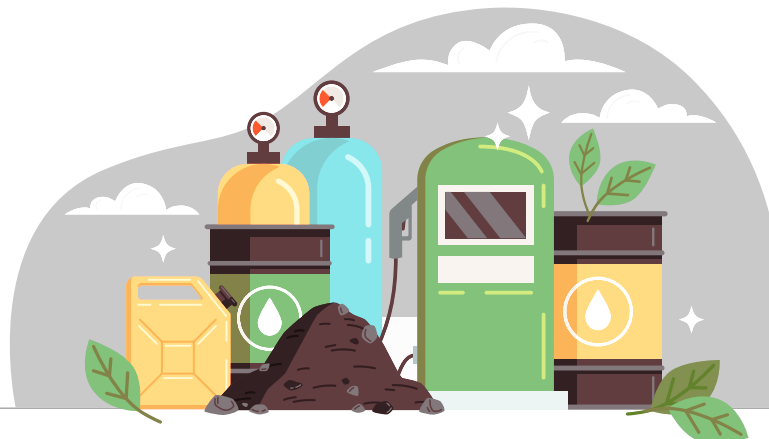
- Climate Risk Management

Economic Performance

- Economic/Financial Performance

Customer Management

- Customer Health and Safety
- Customer Satisfaction
- Customer Management



ESG Progress Dashboard

Production

Parameter	Unit	2023	2022	2021
Fertilizers	tonne	7,270,853	6,423,686	3,755,410
Polymers	tonne	339,131	366,392	447,029
Fibers & Yarns	tonne	435,245	390,218	403,066
Medical Gloves	tonne	40,812	32,938	63,453
Rotational Crops	tonne	102,690	82,439	30,321
Total Production	tonne	8,188,730	7,295,673	4,699,279





Emissions

GHG emissions

Parameter	Unit	2023	2022	2021
Absolute Emissions				
Direct (Scope 1) GHG emissions	tCO ₂ e	4,178,317	3,416,336	2,920,216
Indirect (Scope 2) GHG emissions	tCO ₂ e	708,906	1,002,724	945,316
Total GHG emissions (Scope 1 + Scope 2)	tCO ₂ e	4,887,223	4,419,060	3,865,532
GHG emissions intensity				
Scope 1 GHG intensity	tCO ₂ e/tonne production	0.5	0.5	0.6
Scope 2 GHG intensity	tCO ₂ e/tonne production	0.1	0.1	0.2
Total GHG intensity (Scope 1+ Scope 2)	tCO ₂ e/tonne production	0.6	0.6	0.8

Reduction of GHG emissions due to initiatives[#]

Parameter	Unit	2023	2022	2021
Total GHG emission reduction	tCO ₂ e	172,270	-	-

[#] New disclosed indicator

Air emissions

Parameter	Unit	2023	2022	2021
NOx	kg	2,912,076.4	8,284,570.8	-
SOx	kg	1,038,395.2	2,600,575.7	-
Persistent Organic Pollutants (POP)	kg	0	-	-
Volatile Organic Compounds (VOC)	kg	0	-	-
Hazardous air pollutants (HAP)	kg	0	-	-
Particulate matter (PM)	kg	1,849,531.4	717,654.1	-

Note: We have started reporting on air emissions from 2022 onwards. Air emissions from the IRT Campaka site are not included due to the lack of stack testing.



Energy

Energy consumption

Parameter	Unit	2023	2022	2021
Total energy consumption (direct+indirect)	GJ	72,554,485	74,322,063	64,026,008*
Total direct non-renewable energy consumption	GJ	57,554,793	54,977,408	45,656,730
Coal	GJ	8,780,933	9,258,758	9,429,697
Fuel oil	GJ	47,729	578,532	166,120
Natural gas	GJ	38,897,128	34,586,936	25,053,580
LPG	GJ	17,909	17,728	2,478
Diesel	GJ	1,216,988	1,250,759	1,195,551
Gasoline	GJ	47,187	31,216	23,850
Fuel gas	GJ	8,546,920	9,253,479	9,785,454
Total direct renewable energy consumption	GJ	2,127,298	2,454,277	2,549,500
Biomass	GJ	1,558,515	1,841,756	1,899,719
Biogas	GJ	0	0	0
Solar	GJ	568,783	612,521	649,781
Other sources	GJ	0	0	0
Percentage grid electricity^	%	17.7%	22.7%	24.7%
Total indirect energy consumption* (electricity, cooling, steam purchased from outside of IRC group)	GJ	12,872,394	16,890,378	15,819,778*
Electricity purchased from conventional sources (e.g. natural gas, coal, nuclear, heating oil)	GJ	12,677,542	16,632,382	15,735,785*
Purchased steam	GJ	214,152	200,900	35,708*
Purchased heating	GJ	0	0	0
Purchased cooling	GJ	0	0	0
Renewable electricity purchased through a certificate	GJ	47,392	57,096	48,285*

*Restated number

^ New disclosed indicator



Energy consumption (continued)

Parameter	Unit	2023	2022	2021
Total direct energy sold	GJ	0	0	0
Total steam sold	GJ	66,692	0	0
Total indirect energy sold	GJ	0	0	0
Energy intensity	GJ/tonne production	8.9[#]	10.2	13.6

There is a change in methodology of energy calculations in 2023

Energy reduction due to initiatives[^]

Source	Unit	2023	2022	2021
Total reduction	GJ	2,776,662	16,837	11,160

[^] New disclosed indicator



Water

Water withdrawal, consumption and intensity, breakup by type of activity

Parameter				
All activities	Unit	2023	2022	2021
Total water withdrawn by sources	million m³	351.5	292.7	343.3
Surface water	million m ³	301.6	250	292.3
Once through cooling water	million m ³	0	0	0
Municipal water and water utilities	million m ³	11.0	5	8.9
Groundwater	million m ³	38.7	37.4	42.1
Rainwater	million m ³	0.2	0.2	0
Water consumption[^](includes water consumed by agricultural activities)	million m³	333.8	279.9	327.2
Water intensity	m³/tonne production	42.9	40.1	73.1
Agricultural activities				
All activities	Unit	2023	2022	2021
Total water withdrawn by sources	million m³	287.6	235.4	282.1
Surface water	million m ³	287.6	235.4	282.1
Water consumption[^]	million m³	287.6	235.4	282.1
Water intensity for agricultural activities	m³/tonne production	2,213.7	2,300.9	4,321.3
Manufacturing activities				
All activities	Unit	2023	2022	2021
Total water withdrawn by sources	million m³	63.8	57.2	61.2
Surface water	million m ³	14.0	14.6	10.2
Once through cooling water	million m ³	0	0	0
Municipal water and water utilities	million m ³	11	5.0	8.9
Groundwater	million m ³	38.7	37.4	42.1
Rainwater	million m ³	0.2	0.2	0
Water consumption[^]	million m³	46.2	44.4	45.1
Water intensity for manufacturing activities	m³/tonne production	7.9	8.0	13.2

[^] New disclosed indicator



Water withdrawn from sources by TDS level

Parameter	Unit	2023	2022	2021
Total water withdrawn from all areas	million m³	351.5	292.7	343.3
Surface water	million m³	301.6	250	292.3
Freshwater ($\leq 1,000$ mg/L TDS)	million m ³	14.0	14.6	10.1
Other water ($> 1,000$ mg/L TDS)	million m ³	287.6	235.4	282.1
Groundwater	million m³	38.7	37.4	42.1
Freshwater ($\leq 1,000$ mg/L TDS)	million m ³	38.7	37.4	42.1
Other water ($> 1,000$ mg/L TDS)	million m ³	0	0	0
Rainwater collected & stored	million m³	0.2	0.2	0
Freshwater ($\leq 1,000$ mg/L TDS)	million m ³	0.2	0.2	0
Other water ($> 1,000$ mg/L TDS)	million m ³	0	0	0
Municipal water and water utilities	million m³	11.0	5.0	8.9
Freshwater ($\leq 1,000$ mg/L TDS)	million m ³	10.9	4.9	8.9
Other water ($> 1,000$ mg/L TDS)	million m ³	0.1	0.1	0
Total freshwater ($\leq 1,000$ mg/L TDS)	million m³	63.8	57.2	61.1
Total other water ($> 1,000$ mg/L TDS)	million m³	287.7	235.5	282.2*

*Restated number

Water discharge by destination, type and level of treatment

Parameter	Unit	2023	2022	2021
Total water discharge by destination	million m³	17.6	12.8	16.1*
Surface water	million m ³	17.5	12.8	16.1
Groundwater	million m ³	0	0	0*
Sea water	million m ³	0	0	0*
Third-Party water / Water sent to other organisations	million m ³	0.1	0	0


Water discharge by destination, type and level of treatment (continued)

Parameter	Unit	2023	2022	2021
Total water discharge to all areas by type[^]	million m³	17.6	-	16.1
Freshwater	million m ³	3.9	-	3.8
Other Water	million m ³	13.8	-	12.3
Total water discharge to all areas with water stress[^]	million m³	4.8	-	-
Freshwater	million m ³	0.4	-	-
Other Water	million m ³	4.4	-	-
Water discharge by level of treatment[^]	million m³	17.6	12.8	16.1
No Treatment	million m ³	4.7	12.8	0.2
Primary	million m ³	1.0	0	2.8
Secondary	million m ³	10.3	0	11.7
Tertiary	million m ³	1.6	0	1.4
No. of incidents of non-compliance with discharge limits [^]	Number	0	-	6
Non-Industrial wastewater [^]	million m ³	0	-	-

[^] New disclosed KPI | *Restated number | Note: Water discharge from the STP at YTY (Malaysia) unit has not been included due to the lack of metering.



Waste

Waste generated

Parameter	Unit	2023	2022	2021
Total waste composition	tonne	74,526	78,209	89,753
Hazardous waste	tonne	38,487	43,056	45,809
Non-Hazardous waste	tonne	36,040	35,153	43,944
E-waste	tonne	11	1	3*
Battery waste	tonne	22	117	4*
Food waste	tonne	48	18	20*
Plastic waste	tonne	596	119	335*
Others (e.g. sewage, domestic wastewater)	tonne	11,237	16,689	10,052*

*Restated number | Note: E-waste at YTY (Malaysia) unit has been excluded as the site started recording it in CY2024.

Waste diverted from disposal

Parameter	Unit	2023	2022	2021
Total hazardous waste diverted from disposal	tonne	28,070	34,084	36,939
Reuse	tonne	27,417	33,751	36,576
Recycling	tonne	412	207	53
Other recovery operations	tonne	241	127	311
Percentage of hazardous waste recycled [^]	%	1.1%	0.5%	0.1%
Total non-hazardous waste diverted from disposal	tonne	17,934	18,408	31,726
Reuse	tonne	4,731	6,265	15,121
Recycling	tonne	7,219	7,934	12,649
Other recovery operations	tonne	5,984	4,209	3,955
Percentage of non-hazardous waste recycled [^]	%	20.0%	22.6%	28.8%

[^] New disclosed KPI



Waste directed to disposal

Parameter	Unit	2023	2022	2021
Total hazardous waste directed to disposal	tonne	10,417	8,972	8,870
Incineration (with energy recovery)	tonne	8	0	0
Incineration (without energy recovery)	tonne	127	127	0
Landfilling	tonne	1,893	1,217	1,177
Other disposal operations	tonne	8,389	7,627	7,692
Total non-hazardous waste directed to disposal	tonne	18,106	16,745	12,218
Incineration (with energy recovery)	tonne	533	433	0
Incineration (without energy recovery)	tonne	0	0	0
Landfilling	tonne	12,403	12,359	10,208
Other disposal operations	tonne	5,170	3,953	2,010

Note: In all the tables, data from Georgia unit is for 2023 only as the unit was not a part of IRC in 2022.



Occupational Health and Safety

Man-hours of employees and contractors

Parameter	Unit	2023	2022	2021
Number of Man-hours	Man-hours	73,567,008	67,036,031	64,770,648
Permanent Employee	Man-hours	42,343,307	41,271,898	43,192,969
Male	Man-hours	28,233,588	29,016,310	31,004,766
Female	Man-hours	14,109,719	12,255,588	12,188,203
Contractor	Man-hours	22,198,715	25,764,133	21,577,680
Male	Man-hours	18,614,370	21,921,670	17,848,727
Female	Man-hours	3,584,345	3,842,463	3,728,953
Temporary Employee	Man-hours	9,024,987	-	-
Male	Man-hours	8,222,791	-	-
Female	Man-hours	802,196	-	-

Work-related injuries*

Parameter	Unit	2023	2022	2021
Fatalities	Number	0	5	0
Employees	Number	0	1	0
Male	Number	0	1	0
Female	Number	0	0	0
Contractor	Number	0	4	0
Male	Number	0	4	0
Female	Number	0	0	0
Lost-Time Cases (LTC)	Cases	41	58	-
Employees	Cases	36	50	-
Male	Cases	26	36	-
Female	Cases	10	14	-

* Employees mean permanent and temporary in safety metrics unless stated otherwise



Work-related injuries* (continued)

Parameter	Unit	2023	2022	2021
Contractor	Cases	5	8	-
Male	Cases	5	8	-
Female	Cases	0	0	-
Restricted Work Cases (RWC)	Cases	1	3	-
Employees	Cases	1	3	-
Male	Cases	1	3	-
Female	Cases	0	0	-
Contractor	Cases	0	0	-
Male	Cases	0	0	-
Female	Cases	0	0	-
Medical Treatment Cases	Cases	20	15	-
Employees	Cases	20	9	-
Male	Cases	18	3	-
Female	Cases	2	6	-
Contractor	Cases	0	6	-
Male	Cases	0	6	-
Female	Cases	0	0	-
First Aid Cases (FAC)	Cases	397	320	-
Employees	Cases	312	274	-
Male	Cases	195	171	-
Female	Cases	117	103	-
Contractor	Cases	85	46	-
Male	Cases	85	46	-
Female	Cases	0	0	-

* Employees mean permanent and temporary in safety metrics unless stated otherwise



Work-related injuries* (continued)

Parameter	Unit	2023	2022	2021
Total Recordable Injuries	Cases	62	81	67
Employees	Cases	57	63	60
Male	Cases	45	43	26
Female	Cases	12	20	34
Contractor	Cases	5	18	7
Male	Cases	5	18	6
Female	Cases	0	0	1
Total Lost Time Cases	Cases	42	66	-
Employees	Cases	37	54	-
Male	Cases	27	40	-
Female	Cases	10	14	-
Contractor	Cases	5	12	-
Male	Cases	5	12	-
Female	Cases	0	0	-
Total Lost Time Injury Frequency Rate (LTIFR)	No./million Man-Hours	0.6	1.0	0.5
Employees	No./million Man-Hours	0.9	1.3	0.8
Male	No./million Man-Hours	1.0	1.4	0.6
Female	No./million Man-Hours	0.7	1.1	1.2
Contractor	No./million Man-Hours	0.2	0.5	0.1
Male	No./million Man-Hours	0.3	0.6	0.1
Female	No./million Man-Hours	0.0	0	0
Total Recordable Injury Frequency Rate (TRIFR)	No./million Man-Hours	0.8	1.2	1.0
Employees	No./million Man-Hours	1.3	1.5	1.4
Male	No./million Man-Hours	1.6	1.5	0.8
Female	No./million Man-Hours	0.9	1.6	2.8

* Employees mean permanent and temporary in safety metrics unless stated otherwise



Work-related injuries* (continued)

Parameter	Unit	2023	2022	2021
Contractor	No./million Man-Hours	0.2	0.7	0.3
Male	No./million Man-Hours	0.3	0.8	0.3
Female	No./million Man-Hours	0.0	0	0.3
Near Misses	Cases	433	367	-
Employees	Cases	361	149	-
Male	Cases	350	145	-
Female	Cases	11	4	-
Contractor	Cases	72	218	-
Male	Cases	71	218	-
Female	Cases	1	0	-

* Employees mean permanent and temporary in safety metrics unless stated otherwise

Employees and worker training on occupational health and safety

Parameter	Unit	2023	2022	2021
Safety training programs conducted	Number	4,444	2,381	1,392
Training hours permanent employees	Hours	166,975	100,665	58,360
Training hours temporary employees	Hours	1,620	20,117	774
Training hours contractor workers	Hours	62,122	40,361	28,836
Average training hours per permanent employee	Hours	8.7	6.3	3.3
Average training hours per temporary employee	Hours	0.1	4.3	0.6
Average training hours per contractor worker	Hours	7.5	3.8	3.1



Work - related ill health*

Parameter	Unit	2023	2022	2021
Fatalities as a result of work-related ill health	Cases	0	0	0
Employees	Cases	0	0	0
Male	Cases	0	0	0
Female	Cases	0	0	0
Contractor	Cases	0	0	0
Male	Cases	0	0	0
Female	Cases	0	0	0
High consequence work-related injuries	Cases	0	0	3
Employees	Cases	0	0	3
Male	Cases	0	0	3
Female	Cases	0	0	0
Contractor	Cases	0	0	0
Male	Cases	0	0	0
Female	Cases	0	0	0
Recordable work-related ill health	Cases	0	0	0
Employees	Cases	0	0	0
Male	Cases	0	0	0
Female	Cases	0	0	0
Contractor	Cases	0	0	0
Male	Cases	0	0	0
Female	Cases	0	0	0

* Employees mean permanent and temporary in safety metrics unless stated otherwise



Employees

Workforce details and talent management by region

All locations	Unit	2023	2022	2021
Total employees by gender	Number	23,624	21,207	19,153
Male	Number	16,944	14,844	13,597
Female	Number	6,680	6,364	5,556
Permanent employees	Number	19,222	16,542	17,884
Male	Number	12,909	11,355	12,537
Female	Number	6,313	5,186	5,347
Temporary employees	Number	4,402	4,666	1,269
Male	Number	4,035	3,488	1,060
Female	Number	367	1,177	209
Workers who are not employees[^]	Number	8,228	10,593	9,293
Male	Number	6,712	8,988	7,758
Female	Number	1,517	1,605	1,536

[^] New disclosed KPI

Europe	Unit	2023	2022	2021
Total employees by gender	Number	2,443	448	369
Male	Number	1,436	215	177
Female	Number	1,007	233	192
Permanent employees	Number	2,375	438	369
Male	Number	1,378	207	177
Female	Number	997	231	192



Europe (continued)	Unit	2023	2022	2021
Temporary employees	Number	68	10	0
Male	Number	58	8	0
Female	Number	10	2	0
Workers who are not employees[^]	Number	136	7	9
Male	Number	125	7	8
Female	Number	11	1	1

[^] New disclosed KPI

Asia	Unit	2023	2022	2021
Total employees by gender	Number	16,220	17,880	16,276
Male	Number	10,867	11,941	11,014
Female	Number	5,353	5,940	5,262
Permanent employees	Number	13,586	13,225	15,007
Male	Number	8,526	8,460	9,954
Female	Number	5,060	4,764	5,053
Temporary employees	Number	2,634	4,656	1,269
Male	Number	2,341	3,480	1,060
Female	Number	293	1,175	209
Workers who are not employees[^]	Number	6,141	5,876	4,570
Male	Number	4,690	4,299	3,053
Female	Number	1,451	1,577	1,516

[^] New disclosed KPI

South America	Unit	2023	2022	2021
Total employees by gender	Number	547	367	0
Male	Number	430	291	0
Female	Number	117	76	0



South America (continued)	Unit	2023	2022	2021
Permanent employees	Number	547	367	0
Male	Number	430	291	0
Female	Number	117	76	0
Temporary employees	Number	0	0	0
Male	Number	0	0	0
Female	Number	0	0	0
Workers who are not employees[^]	Number	44	24	0
Male	Number	29	13	0
Female	Number	15	11	0

[^] New disclosed KPI

Africa	Unit	2023	2022	2021
Total employees by gender	Number	4,414	2,512	2,508
Male	Number	4,211	2,397	2,406
Female	Number	203	115	102
Permanent employees	Number	2,714	2,512	2,508
Male	Number	2,575	2,397	2,406
Female	Number	139	115	102
Temporary employees	Number	1,700	0	0
Male	Number	1,636	0	0
Female	Number	64	0	0
Workers who are not employees[^]	Number	1,907	4,685	4,714
Male	Number	1,869	4,670	4,696
Female	Number	39	16	18

Note: Started reporting on total employees by region from 2023.

[^] New disclosed KPI



Total employees by management level

Parameter	Unit	2023	2022	2021
Total employees by Level*	Number	19,222	16,542	17,884
Senior management (G1)	Number	179	179	204
Male	Number	175	174	203
Female	Number	4	5	1
Middle management (G2)	Number	906	688	773
Male	Number	804	594	683
Female	Number	102	94	90
Junior management (G3)	Number	2,606	2,456	1,870
Male	Number	2,050	1,915	1,416
Female	Number	556	541	454
Non management (G4)	Number	15,531	13,219	15,037
Male	Number	9,880	8,669	10,437
Female	Number	5,651	4,550	4,600
Total employees by age*	Number	19,222	16,542	17,884
Male	Number	12,905	11,355	12,498
Female	Number	6,317	5,186	5,386
Over 50 years old	Number	3,968	2,627	2,537
Male	Number	3,108	2,384	2,316
Female	Number	860	243	221
30-50 years old	Number	10,101	9,031	9,509
Male	Number	7,092	6,319	6,776
Female	Number	3,009	2,712	2,733
Below 30 years old	Number	5,153	4,884	5,838
Male	Number	2,705	2,653	3,406
Female	Number	2,448	2,231	2,432

* Only includes permanent employees



New employee hires*

Parameter	Unit	2023	2022	2021
Total employees hired	Number	4,134	1,787	4,390
Male	Number	2,158	1,071	2,484
Female	Number	1,976	716	1,906
Over 50 years old	Number	116	78	238
Male	Number	91	63	210
Female	Number	25	15	28
30-50 years old	Number	1,639	886	1,629
Male	Number	905	530	1,031
Female	Number	734	356	598
Below 30 years old	Number	2,379	823	2,523
Male	Number	1,162	478	1,243
Female	Number	1,217	345	1,280

* Only includes permanent employees

Proportion of senior management hired from local community#

Parameter	Unit	2023	2022	2021
Nationals (Local community)	Number	49	47	-
Expats	Number	75	77	-
Proportion of senior management	%	40%	38%	-

Note: Does not include data from ICS, IAL, and AFT units.

New disclosed indicator



Employees turnover* (continued)

Parameter	Unit	2023	2022	2021
Total employees leaving	Number	3,599	3,982	4,120
Male	Number	2,085	3,039	2,620
Female	Number	1,514	943	1,500
Over 50 years old	Number	485	543	481
Male	Number	412	481	356
Female	Number	73	62	125
30-50 years old	Number	1,621	1,847	1,609
Male	Number	853	1,480	1,135
Female	Number	768	367	474
Below 30 years old	Number	1,493	1,607	2,030
Male	Number	820	1,093	1,129
Female	Number	673	514	901

* Only includes permanent employees

Employees training*

Parameter	Unit	2023	2022	2021
Total training hours provided to employee	Hours	209,072	113,257	69,713
Male	Hours	138,968	91,440	55,183
Female	Hours	70,104	21,817	14,529
Total average training hours	Hours/Employee	10.9	6.8	3.9
Male	Hours/Employee	11	8.1	4.4
Female	Hours/Employee	11	4.2	2.7

* Only includes permanent employees



Performance review*

Parameter	Unit	2023	2022	2021
Total permanent employees	Number	19,222	16,542	17,884
Male	Number	12,909	11,355	12,537
Female	Number	6,313	5,186	5,347
Total employees receiving regular performance reviews	Number	17,995	13,838	15,355
Male	Number	11,972	9,982	10,456
Female	Number	6,023	3,856	4,899
Percentage of employees receiving regular performance reviews (No. of employees receiving review/total no. of employees)	%	94%	84%	86%
Male	%	93%	88%	84%
Female	%	95%	74%	92%

* Only includes permanent employees

Parental leave*

Parameter	Unit	2023	2022	2021
No of employees entitled to parental leaves	Number	11,644	6,971	6,204
Male	Number	6,463	4,836	3,944
Female	Number	5,181	2,135	2,260
No of employees who took parental leave	Number	557	394	485
Male	Number	207	200	132
Female	Number	350	194	353
Number of employees who returned to work after taking parental leave	Number	488	373	431
Male	Number	207	194	132
Female	Number	281	179	299
Retention to work (after parental leave and still employed for the next 12 months)	Number	421	318	408
Male	Number	177	173	128
Female	Number	244	145	280



Parental leave* (continued)

Parameter	Unit	2023	2022	2021
No. of employees who returned after availing parental leave in previous reporting period	Number	360	393	425
Male	Number	156	185	134
Female	Number	204	208	291
Return to work rate	%	88%	95%	89%
Retention rate	%	100%	81%	96%

* Only includes permanent employees

Collective bargaining agreements#

Parameter	Unit	2023	2022	2021
Total number of employees reported under 2-7a	Number	15,640	8,929	-
Total employees covered by collective bargaining agreements	Number	8,539	7,072	-
Percentage of employees covered by collective bargaining agreements	%	58%	79%	-

Note: This data was not tracked in 2021. | Does not include data from IAL unit. | # New disclosed indicator

Ratios of standard entry level wage by gender compared to local minimum wage#

Parameter	Unit	2023	2022	2021
Employees	Ratio	2.2	2.2	-
Male	Ratio	2.2	2.2	-
Female	Ratio	2.2	2.2	-
Workers	Ratio	1.6	1.6	-
Male	Ratio	1.6	1.6	-
Female	Ratio	1.6	1.6	-

Note: Does not include data from ICS, IAL, and AFT units. | # New disclosed indicator



Content Index (GRI, SASB & ESRS)

Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
The organization and its reporting practices	2-1		BP-1	Organizational details	Approach to Reporting	Indorama Corporation Pte Ltd. is a Singapore-based organization, spanning the geographies of Asia, Africa, Europe, and South America.
	2-2		BP-1	Entities included in the organization's	Global Presence	SR 2023: Page No. 15
	2-3		BP-1 IRO-2	Reporting period, frequency and contact point	Reporting Guidelines Feedback	Reporting period: 1 st January to 31 st December Frequency: Annual Feedback: We welcome your suggestions and feedback on this report by email to esg@indorama.com
	2-4		BP-2	Restatements of information No restatements	Third-Party Assurance	All restatement of information is marked at the designated places.
	2-5		BP-2	External assurance		An independent third party, Ernst & Young Associates (EYA) LLP, has performed a limited assurance review of the disclosures in this report and their assurance statement is part of this report.
Activities and workers	2-6		SBM-3	Activities, value chain and other business relationships	Company Overview	SR 2023: Page No. 11, 12, 13
	2-7		S1-6	Employees	ESG Factbook	Page No. 19, 20, 21
	2-8		S1-7	Workers who are not employees	ESG Factbook	Page No. 19, 20, 21
Governance	2-9		GOV-1	Governance structure & composition	Governance Structure	A multi-tiered well defined ESG governance structure is available alongside strong internal governance structure.
	2-10		GOV-1	Nomination and selection of the highest governance body	Governance Structure	SR 2023: Page No. 62
	2-11		GOV-1	Chair of the highest governance body	Governance Structure	SR 2023: Page No. 62



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Governance	2-12		GOV-1	Role of the highest governance body in overseeing the management of impacts	Governance Structure	SR 2023: Page No. 62
	2-13		GOV-2	Delegation of responsibility for managing impacts	Governance Structure	SR 2023: Page No. 62
	2-14		GOV-2	Role of the highest governance body in sustainability reporting	Governance Structure	SR 2023: Page No. 62
	2-15			Conflicts of interest	Conflicts of interest	IRC Group's Code of Conduct provides detailed guidelines for all employees on handling conflicts of interest and preventing the misuse of authority. Directors are required to disclose any conflicts and refrain from participating in related decisions, while Independent Directors play a key role in providing oversight and ensuring impartiality in situations where conflicts may arise.
	2-16		G1-4	Communication of critical concerns		Strong governance structure ensures that the Board maintains a strong oversight in matters of critical concerns which come in through various committees.
	2-17		GOV-1	Collective knowledge of the highest governance body	Board Evaluation	Periodic training sessions on important and emerging subjects are conducted to keep the highest governance body informed.
	2-18			Evaluation of the performance of the highest governance body		A periodic evaluation is conducted through Board Evaluation Process.
	2-19			Remuneration policies		Omission: Indorama works in diverse geographies and maintains strong procedures for determining remuneration. However, we treat this as organization's confidential information.
	2-20			Process to determine remuneration		Omission: Confidential information.
	2-21		S1-16	Annual total compensation ratio		Omission: Confidential information.
Strategy, policies and practices	2-22			Statement on sustainable development strategy	Vice Chairman's Message	SR 2023: Page No. 7
	2-23		DCP	Policy commitments		Our policies are available at: https://www.indorama.com/about-us/group-policies



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Strategy, policies and practices	2-24		E1-2, E2-1, E3-1, E5-1, S1-1, S2-1, S3-1, S4-1, G1-1	Embedding policy commitments	Our Policies & Standards	Indorama enforces a Code of Conduct that applies to all employees, suppliers, trading partners, and business associates. This Code covers various areas including conflicts of interest, insider trading, data security, government interactions, political activities, environmental health and safety (EHS), harassment prevention, non-discrimination, confidentiality, honesty, & integrity. Our policies are available at https://www.indorama.com/about-us/group-policies
	2-25		S1-3, S2-3, S3-3, S4-3	Processes to remediate negative impacts	Grievance Redressal Mechanism	Indorama maintains strong stakeholder consultation process in addition to our grievance mechanism to ensure we listen to feedback of our stakeholders and manage any potential negative impact due to our products or operations.
	2-26			Mechanisms for seeking advice and raising concerns	Grievance Redressal Mechanism	Indorama's Code of Conduct includes a grievance mechanism for addressing concerns regarding the organization's business conduct.
	2-27			Compliance with laws and regulations		Indorama complies with all laws and regulations pertaining to each jurisdiction of its operating facilities.
	2-28			Membership associations	Indorama at a Glance	
Stakeholder Engagement	2-29		SBM-2	Approach to stakeholder engagement	Stakeholder Engagement	SR 2023: Page No. 24
Collective Bargaining	2-30		S1-8	Collective bargaining agreements	Freedom of Association & Collective Bargaining	Indorama promotes collective bargaining where applicable, ensuring a platform for open dialogue.
Material Topics	3-1		IRO-1	Process to determine material topics	Double Materiality Assessment	Based on the CSRD requirement we have undertaken double materiality assessment this year to identify key ESG topics and their subsequent impacts, risks, and opportunities.
	3-2			List of material topics	Double Materiality Assessment	SR 2023: Page No. 28, 29
	3-3		SBM-3	Management of material topics	Double Materiality Assessment	Our material topics have changed in priority since the 2021 materiality assessment and the changes are reflective in our materiality matrix.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Economic Performance	201-1			Direct economic value generated and distributed	Business Highlights	SR 2023: Page No. 12
	201-2			Financial implications & other risks & opportunities due to climate change		Currently TCFD study is underway.
	201-3			Defined benefit plan obligations and other retirement plans		Indorama operates in multiple countries, with retirement plans customized to adhere to the regulations of each respective country. We offer benefits like pre-retirement training, pensions, gratuities, and post-retirement healthcare for up to 5 years in many of our units.
	201-4			Financial assistance received from government		Omission: Confidential information.
Market Presence	202-1			Ratios of standard entry level wage by gender compared to local minimum wage		Omission: Indorama follows the standard entry level wages depending on the country of operation and offers the same to both genders without any discrimination. We treat this information as Company confidential.
	202-2			Proportion of senior management hired from the local community	ESG Factbook	Page No. 23
Indirect Economic Impacts	203-1			Infrastructure investments and services supported		Indorama actively invests in developing infrastructure for improving resilience of local communities that it operates in.
	203-2			Significant indirect economic impacts	Community Development	Indorama continues to monitor its community engagement and initiatives.
Procurement Practices	204-1			Proportion of spending on local suppliers		Omission: Indorama does not track this information.
Anti-Corruption	205-1			Operations assessed for risks related to corruption		Omission: Indorama does not track this information.
	205-2		G1-3	Communication & training about anti-corruption policies & procedures	Ethics and Integrity	Indorama's Responsible Business Policy guides the organization on subjects of Anti-Corruption and Anti-bribery. The policy is available at https://www.indorama.com/about-us/group-policies
	205-3			Confirmed incidents of corruption & actions taken	Ethics and Integrity	No incidents reported for corruption in the reporting period.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Anti-Competitive Behaviour	206-1			Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		No legal actions pending or completed during the reporting period regarding anti-competitive behaviour and violations of anti-trust and monopoly legislation.
Tax	207-1			Approach to tax		Indorama is complying with all the tax laws and regulations in each of the jurisdiction in which it operates.
	207-2			Tax governance, control, and risk management		Indorama takes help of tax advisors to mitigate the risk and optimize tax compliance in each jurisdiction of its operation.
	207-3			Stakeholder engagement and management of concerns related to tax	Stakeholder Engagement	Indorama identifies regulatory bodies as one of our stakeholders and recognize timely tax payment as an area of interest.
Materials	301-1			Materials used by weight or volume	Product Stewardship	Omission: Data not tracked.
	301-2			Recycled input materials used	Product Stewardship	Omission: Data not tracked.
	301-3			Reclaimed products and their packaging materials		Our products include fertilizers, polymers, medical gloves, rotational crops, fibers and yarns. Since our products including polymers, medical gloves, and fibers and yarn are raw materials for other industries; reclaiming of products is not applicable. Fertilizers and rotational crops are consumables and hence reclaiming at the end of life is not applicable.
Energy	302-1	RT-CH-130a., FB-AG-130a.1	E1-5	Energy consumption within the organization	ESG Factbook	Page No. 07, 08
	302-2			Energy consumption outside of the organization		Indorama currently does not measure energy consumption outside the organization. As a part of our 'Decarbonization Study' we have mapped our value chain as per the GHG Protocol and aim to start measuring this in the future.
	302-3			Energy intensity	Energy Management	We monitor energy intensity across our business units to track energy consumption and identify abnormal energy usage if any.
	302-4			Reduction of energy consumption	Energy Management	Indorama is taking energy reduction measures through improvement in energy and operational efficiencies. Such energy reductions will reduce our direct emissions as well.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Energy	302-5			Reductions in energy requirements of products and services		Omission: Data not tracked.
Water	303-1		E3-4	Interactions with water as a shared resource	Water Stewardship	Indorama is diligent about its water usage, and discharge, focusing efforts on improving water recyclability.
	303-2		E3-4	Management of water discharge-related impacts	Water Stewardship	We comply with regulatory requirements and adhere to stringent internal controls. We have installed ETP at every manufacturing facility among which our Haldia unit is a Zero Liquid Discharge (ZLD) unit.
	303-3	RT-CH-140a.1, FB-AG-140a.1		Water withdrawal	ESG Factbook	Page No. 09, 10
	303-4			Water discharge	ESG Factbook	Page No. 10, 11
	303-5	RT-CH-140a.1, FB-AG-140a.1		Water consumption	ESG Factbook	Page No. 09
Biodiversity	304-1		E4	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		Omission: At present, none of Indorama's facilities are located close to areas with significant biodiversity value. This includes regions identified as critical habitats, wetlands, or areas with high species endemism. We identify any potential impacts of our products and the processes that we employ on biodiversity and implement controls and practices to eliminate or control any negative effects and reduce dependencies.
	304-2		E4	Significant impacts of activities, products and services on biodiversity		
	304-3		E4	Habitats protected or restored		
	304-4		E4	IUCN Red List species and national conservation list species with habitats in areas affected by operations		
Emissions	305-1	RT-CH 110a.1, FB-AG-110a.1	E1-5, E1-5	Direct (Scope 1) GHG emissions	ESG Factbook	Page No. 06
	305-2			Energy indirect (Scope 2) GHG emissions	ESG Factbook	Page No. 06



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Emissions	305-3		E1-5	Other indirect (Scope 3) GHG emissions		Omission: Currently in the process of developing processes to report on Scope 3 emissions and will be reporting in future.
	305-4		E1-5	GHG emissions intensity	ESG Factbook	Page no. 06
	305-5			Reduction of GHG emissions	Our Key GHG Emission Reduction Initiatives	Indorama tracks unit wise reduction of GHG emissions which are driven through variety of process optimizations and expansion of renewable energy portfolio.
	305-6		E2-4	Emissions of ozone-depleting substances (ODS)		Omission: Confidential information.
	305-7	RT-CH-120a.1	E2-4	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	ESG Factbook	Page No. 06
Waste	306-3			Significant spills		Omission: Confidential information.
	306-1			Waste generation and significant waste-related impacts	ESG Factbook	Page No. 12
	306-2		E5-2	Management of significant waste-related impacts		Through our responsible waste management practices, aligned with the 4R Principle (Reduce, Reuse, Recycle, Recover), we implement measures to minimize waste generation and enhance reusability. We closely monitor waste to identify and mitigate any potential environmental impacts, ensuring a sustainable approach to resource management.
	306-3	RT-CH-150a.1 RT-CH-150a.1		Waste generated	ESG Factbook	Page No. 12
	306-4		E5-5	Waste diverted from disposal	ESG Factbook	Page No. 12
	306-5			Waste directed to disposal	ESG Factbook	Page No. 13
Supplier Environmental Assessment	308-1			New suppliers that were screened using environmental criteria		Indorama follows Supplier Code of Conduct to foster environmental and social responsibility throughout our supply chain. When selecting vendors, we employ a comprehensive evaluation process that prioritizes ethical sourcing and sustainable practices.
	308-2			Negative environmental impacts in the supply chain and actions taken		



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Employment	401-1			New employee hires and employee turnover	ESG Factbook	Page No. 23
	401-2		S1-11	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Talent Acquisition & Retention	i. Life insurance ii. Health coverage iii. Disability coverage iv. Retirement benefits v. Parental leave vi. Stock ownership (at select units)
	401-3		S1-15	Parental leave	ESG Factbook	Page No. 25, 26
Labor /Management Relations	402-1			Minimum notice periods regarding operational changes		Omission: This issue is handled at unit level and is adapted to needs of local regulation, labor unions, and others.
Occupational Health & Safety	403-1		S1-14	Occupational health and safety management system	Occupational Health & Safety	7 Units of Indorama Corporation currently have Occupational Health and Safety Management systems. We are determined to enhance this number in time to come.
	403-2			Hazard identification, risk assessment, & incident investigation	Occupational Health & Safety	HIRA is conducted and maintained at each site.
	403-3			Occupational health services	Occupational Health & Safety	Onsite availability of first aid is maintained and relevant training is imparted to safety officers.
	403-4			Worker participation, consultation, and communication on occupational health and safety	Occupational Health & Safety	Indorama envisions to continually work towards enhancing our current processes to include stakeholder (worker) consultation during development of OHS systems.
	403-5			Worker training on occupational health and safety	Occupational Health & Safety	Mandatory trainings are given to all our workforce.
	403-6			Promotion of worker health	Occupational Health & Safety	SR 2023: Page No. 47
	403-7			Prevention & mitigation of occupational health & safety impacts directly linked by business relationships	Occupational Health & Safety	SR 2023: Page No. 46, 47, 48, 49



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Occupational Health & Safety	403-8		S1-14	Workers covered by an occupational health and safety management system	Occupational Health & Safety	Workers in 7 of our units are covered by the ISO 45001 health and safety management system, while at the remaining sites, Occupational Health and Safety (OHS) protocols are rigorously followed.
	403-9		S1-14	Work-related injuries	ESG Factbook	Page No. 14, 15, 16, 17
	403-10		S1-14	Work-related ill health	ESG Factbook	Page No. 18
Training & Education	404-1		S1-13	Average hours of training per year per employee	ESG Factbook	Page No. 24
	404-2			Programs for upgrading employee skills and transition assistance programs	Learning & Development	Indorama provides transition assistance programs on a case-to-case basis.
	404-3		S1-13	Percentage of employees receiving regular performance and career development reviews	ESG Factbook	Page No. 25
Diversity & Equal Opportunity	405-1		S1-9	Diversity of governance bodies and employees	Diversity, Equity, and Inclusion	Indorama tracks diversity in its workforce. We currently do not have any female Board member.
	405-2			Ratio of basic salary and remuneration of women to men		Omission: Confidential information.
Non-Discrimination	406-1			Incidents of discrimination and corrective actions taken	Diversity, Equity, and Inclusion	Indorama's Code of Conduct strictly prohibits discrimination based on personal beliefs (ideological views, religion), identity (race, color, ethnicity, gender, sexual orientation, national or regional origin), or status (marital status, age, disability, or any other recognized human right). No incidents were recorded against discrimination.
Freedom of Association & Collective Bargaining	407-1			Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Freedom of Association and Collective Bargaining	Indorama fully supports employees and workers right to form associations as permitted by local laws. We maintain open and ongoing communication with employee associations across our manufacturing facilities.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Child Labor	408-1		S1-17	Operations and suppliers at significant risk for incidents of child labor	Human Rights & Labor Management	Indorama strictly does not engage in any employment of child labor or forced labor. We also encourage our suppliers to build processes and ensure no child labor or forced labor is engaged in operations.
Forced or Compulsory Labor	409-1		S1-17	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Human Rights & Labor Management	
Security Practices	410-1			Security personnel trained in human rights policies or procedures		Omission: Data not tracked.
Rights of Indigenous Peoples	411-1			Incidents of violations involving rights of indigenous peoples		None employed at IRC locations.
Local Communities	413-1			Operations with local community engagement, impact assessments, and development programs	Community Development	We conduct impact assessment of our initiatives and report them through our CSR annual report.
	413-2			Operations with significant actual and potential negative impacts on local communities		
Supplier Social Assessment	414-1			New suppliers that were screened using social criteria		Indorama follows Supplier Code of Conduct to foster environmental and social responsibility throughout our supply chain. When selecting vendors, we employ a comprehensive evaluation process that prioritizes ethical sourcing and sustainable practices.
	414-2			Negative social impacts in the supply chain and actions taken		
Public Policy	415-1		G1-5	Political Contributions		Omission: Confidential information.
Customer Health & Safety	416-1			Assessment of the health and safety impacts of product & service categories	Product Stewardship	Indorama provides MSDS (Material Safety Data Sheet) for each of its products which elaborates all health and safety concerns about the product.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Customer Health & Safety	416-2			Incidents of non-compliance concerning the health and safety impacts of products and services		0 incidents of non-compliance concerning the health and safety impacts of products and services.
Marketing & Labeling	417-1		S4-4	Requirements for product and service information and labeling		Indorama prioritizes product safety through rigorous testing in compliance with stringent standards like REACH. We use safe ingredients to protect the health of our customers and the environment. Detailed safety information and handling instructions are available on all product labels and safety data sheets.
	417-2			Incidents of non-compliance concerning product and service information and labeling		0 incidents of non-compliance concerning product and service information and labeling.
	417-3			Incidents of non-compliance concerning marketing communications		0 incidents of non-compliance concerning marketing communications.
Customer Privacy	418-1			Substantiated complaints concerning breaches of customer privacy and losses of customer data		0 complaints recorded against breaches of customer privacy and losses of customer data.
Governance			GOV-3	Integration of sustainability-related performance in incentive schemes		Currently we do not link any compensation incentives for our administrative, management and supervisory bodies with ESG or sustainability related performance.
			GOV-4	Statement on sustainability due diligence		Indorama incorporates environmental considerations like emissions and waste management, alongside social aspects such as human resources practices and regulatory compliance, during new acquisitions.
			GOV-5	Risk management and internal controls over sustainability reporting	Enterprise Risk Management	Indorama ERM framework identifies risks which pose a threat to our operationality and profitability.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Impact, Risk and Opportunity Management			DC-P	Policies adopted to manage material sustainability matters		https://www.indorama.com/about-us/group-policies
			DC-A	Actions and resources in relation to material sustainability matters	Double Materiality Assessment	SR 2023: Page No. 25, 26, 27
Climate Change			E1-1	Transition plan to reach climate neutrality	Decarbonization Strategy	Indorama has drafted its initial decarbonization study which focuses on 5 highest emitting units, cumulatively responsible for 78% of total emissions. We remain steadfast to increase the scope of reporting in further years.
			E1-3	Actions and resources related to climate change policy		We are implementing a robust ESG software to track progress across all our sites, enabling monthly monitoring. As part of our commitment to reducing our environmental footprint, we are actively rolling out a comprehensive decarbonization plan. Additionally, we have conducted a TCFD assessment to identify climate-related risks and opportunities, and these insights are guiding the development of a concrete mitigation action plan.
			E1-4	Targets for climate change mitigation and adaptation		Omission: Indorama is in process of setting internal targets. We shall disclose the same in forthcoming years.
			E1-6	GHG emissions by Scope 1, 2 & 3 categories and total GHG emissions	ESG Factbook	Page No. 06
			E1-7	GHG reduction and mitigation projects financed through carbon credits		Indorama presently does not finance its GHG reduction and mitigation project through carbon credits.
			E1-8	Internal carbon pricing schemes		ICP is currently being developed under Indorama's Decarbonization plan.
			E1-9	Potential financial effects from material physical and transition risks and potential climate-related opportunities		Indorama is currently pursuing a TCFD study which will encapsulate this information.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Pollution			E2-2	Actions and resources related to pollution	Waste Management	We are implementing a robust ESG software to track progress across all our sites, enabling monthly monitoring. As part of our commitment to reducing our environmental footprint, we are actively rolling out a comprehensive decarbonization plan. Additionally, we have conducted a TCFD assessment to identify climate-related risks and opportunities, and these insights are guiding the development of a concrete mitigation action plan.
			E2-3	Targets related to pollution		Omission: Indorama is in process of setting internal targets in line with its decarbonization plan. We shall disclose the same in forthcoming years.
			E2-5	Substances of concern and substances of very high concern	Product Stewardship	Indorama maintains an internal Do Not Develop list encompassing substances of concern and very high concern and internally maintains the information on use, production and transport of the same.
			E2-6	Potential financial effects from pollution-related impacts, risks and opportunities		Indorama conducted its first double materiality assessment in 2023. Through this assessment potential financial effects have been determined. This information is available internally.
Water and Marine Resources			E3-2	Actions and resources related to water and marine resources	Water Stewardship	Indorama currently only has site level action plan.
			E3-3	Targets for water and marine resources		Omission: Indorama is in process of setting internal targets in line with its decarbonization plan. We shall disclose the same in forthcoming years.
			E3-5	Potential financial effects from water and marine resources-related impacts, risks and opportunities		Indorama conducted its first double materiality assessment in 2023. Through this assessment potential financial effects have been determined. This information is available internally.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission	
Biodiversity and Ecosystems			E4-1	Transition plan on biodiversity and ecosystems			
			E4-2	Policies related to biodiversity and ecosystems			
			E4-3	Actions and resources related to biodiversity and ecosystems		At present, none of Indorama's facilities are located close to areas with significant biodiversity value. This includes regions identified as critical habitats, wetlands, or areas with high species endemism. We identify any potential impacts of our products and the processes that we employ on biodiversity and implement controls and practices to eliminate or control any negative effects and reduce dependencies.	
			E4-4	Targets related to biodiversity and ecosystems			
			E4-5	Impact metrics related to biodiversity and ecosystems change			
			E4-6	Potential financial effects from biodiversity and ecosystem-related impacts, risks and opportunities			
Resource Use and Circular Economy			E5-2	Actions and resources related to resource use and circular economy	Environment Preservation		We recognize the impact of our products throughout their lifecycle and actively seek ways to minimize waste and maximize resource utilization. We are reducing waste sent to disposal through recycling efforts.
			E5-3	Targets related to resource use and circular economy			Omission: Indorama is in process of setting internal targets. We shall disclose the same in forthcoming years.
			E5-4	Resource inflows	Product Stewardship	SR 2023: Page No. 65, 66	
			E5-5	Resource outflows	Product Stewardship	We recognize the impact of our products throughout their lifecycle and actively seek ways to minimize waste and maximize resource utilization.	
			E5-6	Potential financial effects from resource use and circular economy-related impacts, risks and opportunities		Omission: Confidential information.	



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Own Workforce			S1-4	Taking action on material impacts on own workforce, and approaches to mitigating material risks and pursuing material opportunities related to own workforce, and effectiveness of those actions	Human Capital Development	SR 2023: Page No. 50, 51, 52, 53
			S1-5	Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities		Omission: Indorama is in process of setting internal targets. We shall disclose the same in future.
			S1-10	Adequate wages	Talent Acquisition & Retention	Indorama compensates its employees fairly, exceeding the minimum wage requirements set by local laws in all our domestic and international locations.
			S1-12	Persons with disabilities		Indorama is an equal opportunity employer and does not discriminate on basis of disability.
			S1-17	Incidents, complaints and severe human rights impacts and incidents	Human Rights & Labor Management	0 cases of non-compliance.
Workers in the Value Chain			S2-4	Taking action on material impacts on value chain workers and approaches to mitigating material risks and pursuing material opportunities related to value chain workers, and effectiveness of those actions	Sustainable Supply Risk Management	SR 2023: Page No. 64
			S2-5	Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities		Omission: Indorama is in process of setting internal targets. We shall disclose the same in future.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Affected Communities			S3-4	Taking action on material impacts on affected communities and approaches to mitigating material risks and pursuing material opportunities related to affected communities, and effectiveness of those actions	Community Relations and Investments	SR 2023: Page No. 56, 57, 58, 59, 60
			S3-5	Targets related to managing material impacts on affected communities		Indorama is in process of setting internal targets. We shall disclose the same in forthcoming years.
Consumers and End-Users			S4-4	Taking action on material impacts on consumers and end-users and approaches to mitigating material risks and pursuing material opportunities related to consumers and end-users, and effectiveness of those actions	Product Quality & Safety	SR 2023: Page No. 66
			S4-5	Targets related to managing material impacts on consumers and end-users		Omission: Indorama is in process of setting internal targets. We shall disclose the same in forthcoming years.
Business Conduct			G1-2	Management of relationships with suppliers	Sustainable Supply Risk Management	Indorama recognizes suppliers as one of its key stakeholders. It conducts periodic interactions on various areas of interests. Supplier screening and audits are conducted as per internal standards.
			G1-6	Payment Practices		Indorama adheres to best industry practices for payment. The information with respect to Payment Practices is available internally.
Greenhouse Gas Emissions		RT-CH-110a.1		Percentage covered under emissions limiting regulations		Omission: Not applicable to Indorama as not part of emissions limiting regulations like California Cap-and Trade, European Union Emissions Trading Scheme (EU ETS) and Quebec Cap-and-Trade (Quebec Environment Quality Act).
		FB-AG-110a.3		Fleet fuel consumed		Omission: Currently in the process of developing processes to report on Scope 3 emissions and will be reporting on fleet fuel consumption in future.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Water Management		RT-CH-140a.1 FB-AG-140a.1		Percentage of each in regions with High or Extremely High Baseline Water Stress	Water Stress Assessment	Indorama has identified sites with Extremely High- and High-Water Stress across its operations. We remain committed to improving our water stewardship efforts across organization.
		RT-CH-140a.2 FB-AG-140a.3		Number of incidents of non-compliance associated with water quality permits, standards and regulations		0 incidents were reported in the reporting period.
	Workforce Health & Safety		RT-CH-320a.1 FB-AG-320a.1		Total recordable incident rate (TRIR) for (a) direct employees and (b) contract employees	
		RT-CH-320a.1 FB-AG-320a.1		Fatality rate for (a) direct employees and (b) contract employees		a. Fatality Rate for Direct Employees: 0 b. Fatality Rate for Contract Employees: 0
		FB-AG-320a.1		Near miss frequency rate (NMFR) for (a) direct employees and (b) contract employees		a. NMFR for Direct Employees: 8.5 b. NMFR for Contract Employees: 3.2
Product Design for Use-phase Efficiency		RT-CH-410a.1		Revenue from products designed for use phase resource efficiency		Omission: Confidential information.
Safety & Environmental Stewardship of Chemicals		RT-CH-410b.1		(1) Percentage of products that contain Globally Harmonised System of Classification and Labelling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances (2) Percentage of such products that have undergone a hazard assessment		Our fertilizers and polymers, classified as Category 1 and 2 under the Global Harmonized System (GHS), undergo thorough health and safety impact assessments, with corresponding Material Safety Data Sheets (MSDS) available. This process is not applicable to our medical gloves, rotational crops, and fibers & yarns products. 100% of our Urea and polymers and products have undergone a hazard assessment.



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
GMO Management		RT-CH-410c.1		Percentage of products by revenue that contain genetically modified organisms (GMOs)		No GMOs were used in our operations.
Operational Safety, Emergency Preparedness & Response		RT-CH-540a.1		Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)		LTIFR: 0.6 TRIFR: 0.8
		RT-CH-540a.2		Number of transport incidents		No transport incidents recorded in the reporting period.
Food Safety		FB-AG-250a.1		Global Food Safety Initiative (GFSI) audit (1) non-conformance rates and (2) associated corrective action rates for (a) major and (b) minor non-conformances		Omission: Through Double Materiality Assessment Food Safety has been prioritized as low priority. We do not monitor these indicators.
		FB-AG-250a.2		Percentage of agricultural products sourced from suppliers certified to a Global Food Safety Initiative (GFSI) recognised food safety certification programme		
		FB-AG-250a.3		(1) Number of recalls issued and (2) total amount of food product recalled		



Topic	GRI	SASB	ESRS	Description	Section in the SR 2023/Factbook	Page No. / Reference/ Responses/ Reason for omission
Environmental & Social Impacts of Ingredient Supply Chain		FB-AG-430a.1		(1) Percentage of agricultural products sourced that are certified to a third-party environmental or social standard, and (2) percentages by standard		None
		FB-AG-430a.2		Suppliers' social and environmental responsibility audit (1) non-conformance rate and (2) associated corrective action rate for (a) major and (b) minor nonconformances	Sustainable Supply Risk Management	Indorama conducts regular site visits and audits to verify supplier's operations and working conditions.
Ingredient Sourcing		FB-AG-440a.2		Percentage of agricultural products sourced from regions with High or Extremely High Baseline Water Stress		We do not source agricultural products from regions with High or Extremely High Baseline Water Stress.



Assurance Statement

Sustainability Report



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working world

Ernst & Young Associates LLP
22 Camac Street,
3rd Floor, Block -C
Kolkata -700016,
India

Tel: +91 22 6192 0000
Fax: +91 22 6192 3000
ey.com

Independent practitioner's assurance report

Indorama Corporation PTE Ltd.

143 Cecil Street, #14-00

GB Building

Singapore 069542

Scope

We have been engaged by Indorama Corporation PTE Ltd. (hereafter "Indorama") to perform a 'limited assurance engagement,' as defined by International Standards on Assurance Engagements, here after referred to as the engagement, to report on select non-financial Key Performance Indicators (KPIs) (mentioned in Annexure-1 below) (the "Subject Matter") contained in Indorama's (the "Company's") Sustainability Report CY 2023 as of 27 September 2024 for the year ended 31st December 2023 for the period from 01 January 2023 to 31 December 2023 (the "Report").

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

Criteria applied by Indorama

In preparing the select non-financial KPIs contained in the Sustainability Report CY 2023, Indorama applied the GRI Standards of the Global Reporting Initiative (Criteria). Such Criteria were specifically designed for the select non-financial KPIs; As a result, the subject matter information may not be suitable for another purpose.

Indorama's responsibilities

Indorama's management is responsible for selecting the Criteria, and for presenting the select non-financial KPIs contained in the Sustainability Report CY 2023 in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our engagement in accordance with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ('ISAE 3000 (Revised)'), and the terms of reference for this engagement as agreed with Indorama on 31 May 2024 and its subsequent amendment dated 22 August 2024. Those standards require that we plan and perform our engagement to express a conclusion on whether we are aware of any material modifications that need to be made to the Subject Matter in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.



Our independence and quality management

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Management 1, Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services engagements, which requires that we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Indorama's select non-financial KPIs for CY 2023 and related information, and applying analytical and other appropriate procedures.

Our procedures included:

- Checking the standard disclosures regarding the company's material sustainability aspects contained in the Sustainability Report CY 2023.
- Checking of consistency of data / information within the Sustainability Report CY 2023.
- Carry out limited assurance including checking of the sample data and information reported at the selected sites finalised in mutual discussion with Indorama and corporate office at New Delhi, India.
- Checking of audit trail of selected claims and data streams to determine the level of accuracy in collection, transcription and aggregation processes followed.
- Conducting interview of select representatives of Company's management to understand the current processes in place for collecting, collating, and reporting the subject matter as per GRI Standards, and the progress made during the reporting period.
- We also performed such other procedures as we considered necessary in the circumstances. Checking that the calculation criteria have been correctly applied in accordance with the methodologies outlined in the criteria.

We also performed such other procedures as we considered necessary in the circumstances.

The assurance scope excludes:

- Data and information outside the defined reporting period of: 01 January 2023 to 31 December 2023
- Data and information on economic and financial performance of the Company
- Data, statements and claims already available in the public domain through Sustainability Report, or other sources available in the public domain
- The Company's statements that describe the expression of opinion, belief, inference, aspiration, expectation, aim or future intention
- The Company's compliance with regulations, acts, guidelines with respect to various regulatory agencies and other legal matters.



Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the select non-financial KPIs contained in the Sustainability Report CY 2023 as of 27 September 2024, for the period from 01 January 2023 to 31 December 2023 in order for it to be in accordance with the Criteria.

Ernst & Young Associates LLP

27 September 2024
Kolkata, India

Annexure I (Subject Matter)

S.No.	Relevant Indicators	GRI	Disclosures
1	2-28		Membership of associations
2	302-1		Energy consumption within the organisation
3	302-3		Energy Intensity
4	302-4		Reduction of energy consumption
5	305-6		Emissions of ozone-depleting substances (ODS)
6	305-7		Nitrogen oxides (NOx), Sulphur oxides (SO ₂), and other significant air emissions
7	306-3		Waste generated
8	306-4		Waste diverted from disposal
9	306-5		Waste directed to disposal
10	303-3		Water withdrawal
11	303-4		Water discharge
12	303-5		Water consumption
13	401-1		New employee hires and employee turnover
14	404-1		Average hours of training per year per employee
15	404-3		Percentage of employees receiving regular performance and career development reviews
16	403-1		Occupational health and safety management system
17	403-2		Hazard identification, risk assessment, and incident investigation
18	403-5		Worker training on occupational health and safety
19	403-8		Workers covered by an occupational health and safety management system
20	403-9		Work-related injuries
21	408-1		Operations and suppliers at significant risk for incidents of child labor
22	409-1		Operations and suppliers at significant risk for incidents of forced or compulsory labor
23	413-1		Operations with local community engagement, impact assessments, and development programs



Assurance Statement

GHG Emissions



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Ernst & Young Associates LLP
22 Camac Street,
3rd Floor, Block -C'
Kolkata -700016,
India

Tel: +91 22 6192 0000
Fax: +91 22 6192 3000
ey.com

Independent practitioner's assurance report on Indorama Corporation PTE. Ltd.'s Greenhouse Gas (GHG) Statement

Indorama Corporation PTE Ltd.
143 Cecil Street, #14-00
GB Building
Singapore 069542

Scope

We have been engaged by Indorama Corporation PTE Ltd. (hereafter "Indorama") to perform a 'limited assurance engagement,' as defined by International Standards on Assurance Engagements, here after referred to as the engagement, to report on the accompanying GHG statement of Indorama as of 27 September 2024 for the period from 01 January 2023 to 31 December 2023, comprising of GHG emissions related Key Performance Indicators (KPIs) included in the Sustainability report CY 2023 (the "Subject Matter") detailed in Annexure I.

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

Criteria applied by Indorama Corporation PTE Ltd.

In preparing GHG emissions related KPIs contained in the Sustainability Report CY 2023, Indorama applied the GRI Standards of the Global Reporting Initiative (Criteria). The Criteria can be accessed publicly on the Global Reporting Initiative website and the same are available for all the intended users. Such Criteria were specifically designed for reporting on select non-financial KPIs. As a result, the subject matter information may not be suitable for another purpose.

Indorama Corporation PTE Ltd.'s responsibilities

Indorama Corporation PTE Ltd.'s management is responsible for selecting the Criteria, and for presenting the GHG emissions related KPIs (as included in Annexure I) in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

Our engagement was conducted in accordance with the International Standard for Assurance Engagements on Greenhouse Gas Statements ('ISAE 3410'), and the terms of reference for this engagement as agreed with Indorama Corporation PTE Ltd on 31 May 2024 and its subsequent amendment dated 22 August 2024. Those standards require that we plan and perform our engagement to express a conclusion on whether we are aware of any material modifications that need to be made to the Subject Matter in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.



We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion.

Our independence and quality management

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and have the required competencies and experience to conduct this assurance review.

EY also applies International Standard on Quality Management 1, Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services engagements, which requires that we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

The Green House Gas quantification process is subject to scientific uncertainty, which arises because of incomplete scientific knowledge about the measurement of GHGs. Additionally, GHG procedures are subject to estimation (or measurement) uncertainty resulting from the measurement and calculation processes used to quantify emissions within the bounds of existing scientific knowledge.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the GHG emissions related Key Performance Indicators (KPIs) included in the Sustainability report and related information, and applying analytical and other relevant procedures.

Our procedures included:

- Conducting interview of select representatives of Company's management to understand the process for collecting, collating, and reporting the subject matter as per WBCSD GHG Protocol Corporate Accounting and Reporting Standard which is being referred in the GRI Standard for preparing GHG emissions.
- Checking of data for Indorama on a selective test basis for the following locations and through consultations with the plant and corporate sustainability team:
 - IRT-Campaka, Indonesia
 - YTY Industry Holdings, Malaysia
 - Indorama India Pvt. Ltd – Fertiliser division, Jagdishpur, IJ, India
 - Indorama Eleme Petro chemical (IPL), Nigeria
 - Indorama Fertilizers & Chemical Ltd. (IFL), Nigeria
- Checking calculations and methodologies outlined in the Criteria
- Undertaking analytical procedures to check the reasonableness of the data
- Checking of an audit trail of claims and data streams, on a selective test basis, to determine the level of accuracy in the collection, transcription, and aggregation processes followed.



We also performed such other procedures as we considered necessary in the circumstances.

The assurance scope excludes:

- Data and information outside the defined reporting period of: 01 January 2023 to 31 December 2023
- Data and information on the economic and financial performance of the Company
- Data, statements, and claims already available in the public domain through Sustainability Report, or other sources available in the public domain
- The Company's statements that describe the expression of opinion, belief, inference, aspiration, expectation, aim, or future intention
- The Company's compliance with regulations, acts, and guidelines concerning various regulatory agencies and other legal matters.

Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the GHG emissions related KPIs included in the Sustainability report CY 2023 as of 27 September 2024 for the period from 01 January 2023 to 31 December 2023, in order for it to be in accordance with the Criteria.

Ernst & Young Associates LLP

27 September 2024

Kolkata, India

Annexure I (Subject Matter)

S.No.	GRI	Indicators
1	305-1	Direct (Scope 1) GHG emissions
2	305-2	Energy indirect (Scope 2) GHG emissions
3	305-4	GHG emissions intensity
4	305-5	Reduction of GHG emissions



Nigerian Manufacturing Site

INDORAMA

Corporate Office

143 Cecil Street, #14-00 GB
Building, Singapore – 069542

esg@indorama.com

www.indorama.com