

# Sustainable Growth. Better Tomorrow.





# Structure



Scope and boundary <b>1</b>	Material topics <b>2</b>	Production <b>3</b>	Energy <b>4</b>	Emission <b>5</b>	Water <b>6</b>
Waste <b>7</b>	Employees <b>8</b>	Occupational Health and safety <b>10</b>	Indorama Corporation Governance Board <b>13</b>	Independent Assurance Statement <b>14</b>	GRI Content Index <b>18</b>



## BUSINESS

# Scope and boundary

## OPERATIONAL ENTITIES COVERED IN 2022 SUSTAINABILITY REPORT

Sr. No.	Company Name	Business	Country
<b>Asia</b>			
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	F.E. Indorama Kokand Textile JSC	Spun Yarn	Uzbekistan
10	JSC Indorama Kokand Fertilizers & Chemicals	Fertilizers	Uzbekistan
<b>Europe</b>			
11	Indorama Iplik San. Ve.Tic. A.S.	Spun Yarn	Turkey
<b>Africa</b>			
12	Indorama Eleme Petrochemicals Limited	Petrochemical	Nigeria
13	Indorama Eleme Fertilizer & Chemicals Limited	Fertilizers	Nigeria
14	TAK Agro & Chemicals Limited*	Fertilizers (blending)	Nigeria
15	Industries Chimiques Du Senegal	Fertilizers	Senegal
<b>South America</b>			
16	Adufertil Fertilizantes LTDA	Fertilizers (blending and distribution)	Brazil
17	Adfert*	Fertilizers	Brazil
<b>Europe</b>			
18	JSC RUSTAVI AZOT*	Fertilizers	Georgia

\* not part of the reporting boundary in 2022.

Note: Rounding-off errors are present in the reported values due to the inherent limitations of numerical precision. These discrepancies are within an acceptable range and do not significantly impact the overall accuracy of the results.





# Material topics

## Environment



### Energy and climate change

GHG emissions and climate adaption  
Energy management



### Green manufacturing

Solid waste management  
Effluents management  
Plastic waste  
Pollution prevention



### Biodiversity and land-use

Biodiversity and land-use



### Water resources

Water management

## Social



### Safety

Occupational health and safety



### Human capital and diversity

Employee well-being  
Talent attraction and retention  
Gender inclusion



### Human rights and labour

Human rights  
Labour practices



### Community development

Community relations

## Governance



### Ethics and integrity

Ethics  
Tax transparency  
Grievance redressal



### Product stewardship

Product stewardship



### Risk management

Risk management



### Digitalization and cybersecurity

Innovation and technology  
Data privacy

# Production

GRI Standards	Total production (captive consumption)	Unit	2022	2021
General	<b>Total production</b>	tonne	7,295,673*	4,699,279
	Fertilizers	tonne	6,423,686	3,755,410
	Polymers	tonne	366,392	447,029
	Fibers & Yarns	tonne	390,218	403,066
	Medical Gloves	tonne	32,938	63,453
	Rotational Crops	tonne	82,439	30,321

\*Production increased with the addition of new business units in India and Brazil, expansion in our Turkey unit along with higher production in other business units





# Energy

GRI Standards	Energy	Unit	2022	2021
<b>Total fuel consumption within the organization from non-renewable sources</b>				
<b>302-1</b>	<b>Total non-renewable energy consumption</b>	GJ	54,977,408	45,656,730
	• Coal	GJ	9,258,758	9,429,697
	• Fuel oil	GJ	578,532	166,120
	• Natural gas	GJ	34,586,936	25,053,580
	• LPG	GJ	17,728	2,478
	• Diesel	GJ	1,250,759	1,195,551
	• Gasoline	GJ	31,216	23,850
	• Fuel gas	GJ	9,253,479	9,785,454
<b>Total fuel consumption within the organization from renewable sources</b>				
<b>302-1</b>	<b>Total renewable energy consumption</b>	GJ	1,841,756	1,899,719
	• Biomass	GJ	1,841,756	1,899,719
	• Biogas	GJ	0	0
<b>Total indirect energy consumption (electricity, cooling, steam purchased from outside of IVL group)</b>				
<b>302-1</b>	<b>Total indirect energy consumption</b>	GJ	17,502,898	16,433,851
	• Renewable electricity generated and consumed	GJ	612,521	649,781
	• Electricity purchased from conventional sources (e.g. natural gas, coal, nuclear, heating oil)	GJ	16,632,382	15,784,070
	• Purchased steam	GJ	200,900	0
	• Purchased heating	GJ	0	0
	• Purchased cooling	GJ	0	0
	• Renewable electricity purchased through certificate	GJ	57,096	0
	<b>Total direct energy sold</b>	GJ	0	0
	<b>Total steam sold</b>	GJ	0	0
	<b>Total indirect energy sold</b>	GJ	0	0
<b>Energy Intensity*</b>				
302-3	Energy intensity	GJ/tonne of production	10.19	13.62

\*Higher production increase with respect to total energy consumption for the year 2022 has led to decrease in energy intensity figure in comparison to 2021.

# Emission

GRI Standards	Emissions	Unit	2022	2021
305-1	Direct (Scope 1) GHG emissions	tCO <sub>2</sub> e	3,416,336	2,920,216
305-2	Indirect (Scope 2) GHG emissions	tCO <sub>2</sub> e	1,002,724	945,316
	Total GHG emissions (Scope 1 + Scope 2)	tCO <sub>2</sub> e	4,419,060	3,865,532
<b>GHG emissions intensity*</b>				
305-4	Scope 1 GHG intensity	tCO <sub>2</sub> e/tonne production	0.47	0.62
	Scope 2 GHG intensity	tCO <sub>2</sub> e/tonne production	0.14	0.20
	Scope 1 + Scope 2 GHG intensity	tCO <sub>2</sub> e/tonne production	0.61	0.82
<b>Significant air emissions<sup>^</sup></b>				
305-7	NOX	Kg	8,284,570.76	-
	SOX	Kg	2,600,575.72	-
	Persistent organic pollutants (POP)	Kg	0.00	-
	Volatile organic compounds (VOC)	Kg	0.00	-
	Hazardous air pollutants (HAP)	Kg	0.00	-
	Particulate matter (PM)	Kg	717,654.08	-

\*Considerable growth in our production along with our efforts to decrease emissions have led to decrease in 2022 emission intensity figures as compared to 2021

<sup>^</sup>New disclosed KPI

# Water

GRI Standards	Water	Unit	2022	2021
<b>Water withdrawal and consumption</b>				
<b>303-5</b>	<b>Total water withdrawn by sources</b>	million m <sup>3</sup>	292.7	343.3
	• Surface water	million m <sup>3</sup>	250.0	292.3
	• Once through cooling water	million m <sup>3</sup>	0.0	0.0
	• Municipal water and water utilities	million m <sup>3</sup>	5.0	8.9
	• Groundwater	million m <sup>3</sup>	37.4	42.1
	• Rainwater	million m <sup>3</sup>	0.2	0.0
	Water intensity*	m <sup>3</sup> /tonne production	40.1	73.06
<b>Water withdrawal</b>				
<b>303-3</b>	<b>Total Water withdrawn from all areas</b>	million m <sup>3</sup>	292.7	343.3
	<b>Surface water</b>	million m <sup>3</sup>	250.0	292.3
	• Fresh water (≤1,000 mg/L TDS)	million m <sup>3</sup>	14.6	10.1
	• Other water (>1,000 mg/L TDS)	million m <sup>3</sup>	235.4	282.1
	<b>Ground water</b>	million m <sup>3</sup>	37.4	42.1
	• Fresh water (≤1,000 mg/L TDS)	million m <sup>3</sup>	37.4	42.1
	• Other water (>1,000 mg/L TDS)	million m <sup>3</sup>	0.0	0.0
	<b>Rainwater collected &amp; stored</b>	million m <sup>3</sup>	0.2	0.0
	• Fresh water (≤1,000 mg/L TDS)	million m <sup>3</sup>	0.2	0.0
	• Other water (>1,000 mg/L TDS)	million m <sup>3</sup>	0.0	0.0
	<b>Produced water</b>	million m <sup>3</sup>	0.0	0.0
	• Fresh water (≤1,000 mg/L TDS)	million m <sup>3</sup>	0.0	0.0
	• Other water (>1,000 mg/L TDS)	million m <sup>3</sup>	0.0	0.0
	<b>Municipal water and water utilities</b>	million m <sup>3</sup>	5.0	8.9
	• Fresh water (≤1,000 mg/L TDS)	million m <sup>3</sup>	4.9	8.9
	• Other water (>1,000 mg/L TDS)	million m <sup>3</sup>	0.1	0.0
	<b>Total fresh water (≤1,000 mg/L TDS)</b>	million m <sup>3</sup>	57.2	61.1
	<b>Total other water (&gt;1,000 mg/L TDS)</b>	million m <sup>3</sup>	235.5	282.1
<b>Water discharge</b>				
<b>303-4</b>	<b>Total water discharge by destination</b>	million m <sup>3</sup>	12.8	17.9
	• Surface water	million m <sup>3</sup>	12.8	16.1
	• Ground water	million m <sup>3</sup>	0.0	1.7
	• Sea water	million m <sup>3</sup>	0.0	0.1
	• Third party water	million m <sup>3</sup>	0.0	0.0

\*Process optimization along with water efficiency related projects have led to significant decrease in our water intensity for the year 2022

# Waste

GRI Standards	Waste	Unit	2022	2021
<b>Waste generated</b>				
<b>306-3</b>	<b>Total waste composition</b>	tonne	78,209	89,753
	• Hazardous waste	tonne	43,056	45,809
	• Non-Hazardous waste	tonne	35,153	43,944
	e-waste <sup>^</sup>	tonne	1	-
	Battery waste <sup>^</sup>	tonne	117	-
	Food waste <sup>^</sup>	tonne	18	-
	Plastic waste <sup>^</sup>	tonne	119	-
	Others (e.g. sewage, domestic waste water) <sup>^</sup>	tonne	16,689	-
<b>Waste diverted from disposal</b>				
<b>306-4</b>	<b>Total hazardous waste diverted from disposal</b>	tonne	34,084	36,939
	• Reuse	tonne	33,751	36,576
	• Recycling	tonne	207	53
	• Other recovery operations	tonne	127	311
	<b>Total non-hazardous waste diverted from disposal</b>	tonne	18,408	31,726
	• Reuse	tonne	6,265	15,121
	• Recycling	tonne	7,934	12,649
	• Other recovery operations	tonne	4,209	3,955
<b>Waste directed to disposal</b>				
<b>306-5</b>	<b>Total hazardous waste directed to disposal</b>	tonne	8,972	8,870
	• Incineration (with energy recovery)	tonne	0	0
	• Incineration (without energy recovery)	tonne	127	0
	• Landfilling	tonne	1,217	1,177
	• Other disposal operations	tonne	7,627	7,692
	<b>Total non-hazardous waste directed to disposal</b>	tonne	16,745	12,218
	• Incineration (with energy recovery)	tonne	433	0.01
	• Incineration (without energy recovery)	tonne	0	0.01
	• Landfilling	tonne	12,359	10,208
	• Other disposal operations	tonne	3,953	2,010

<sup>^</sup>New disclosed KPI

# Employees

GRI Standards	Human Resources	Unit	IRC All (2022)	IRC All (2021)
<b>Employees</b>				
GRI2-7a	<b>Total employees by gender</b>	Person	21,207	19,153
	Male	Person	14,844	13,597
	Female	Person	6,364	5,556
GRI2-7b	<b>Total permanent employees</b>	Person	16,542	17,884
	Male	Person	11,355	12,537
	Female	Person	5,186	5,347
	<b>Total temporary employees</b>	Person	4,666	1,269
	Male	Person	3,488	1,060
	Female	Person	1,177	209
405-1	<b>Total employees by Level*</b>	Person	16,455	18,494
	<b>Senior management (G1)</b>	Person	179	204
	Male	Person	174	203
	Female	Person	5	1
	<b>Middle management (G2)</b>	Person	688	773
	Male	Person	594	683
	Female	Person	94	90
	<b>Junior management (G3)</b>	Person	2,456	1,870
	Male	Person	1,915	1,416
	Female	Person	541	454
	<b>Non management (G4)</b>	Person	13,122	15,647
	Male	Person	8,605	10,860
	Female	Person	4,517	4,787
	<b>Total employees by age*</b>	Person	16,445	17,366
	Male	Person	11,290	12,136
	Female	Person	5,155	5,230
	<b>Over 50 years old</b>	Person	2,612	2,464
	Male	Person	2,370	2,249
	Female	Person	242	215
	<b>30-50 years old</b>	Person	8,978	9,234
Male	Person	6,282	6,580	
Female	Person	2,696	2,654	
<b>Below 30 years old</b>	Person	4,855	5,668	
Male	Person	2,638	3,307	
Female	Person	2,217	2,361	
<b>New employee hires*</b>				
401-1	<b>Total employees hired*</b>	Person	1,787	4,390
	Male	Person	1,071	2,484
	Female	Person	716	1,906
	<b>Over 50 years old</b>	Person	78	238
	Male	Person	63	210
	Female	Person	15	28
	<b>30-50 years old</b>	Person	886	1,629
	Male	Person	530	1,031
	Female	Person	356	598
	<b>Below 30 years old</b>	Person	823	2,523
	Male	Person	478	1,243
	Female	Person	345	1,280

GRI Standards	Human Resources	Unit	IRC All (2022)	IRC All (2021)
<b>Employees turnover*</b>				
401-1	<b>Total employees leaving*</b>	Person	3,982	4,120
	Male	Person	3,039	2,620
	Female	Person	943	1,500
	<b>Over 50 years old</b>	Person	543	481
	Male	Person	481	356
	Female	Person	62	125
	<b>30-50 years old</b>	Person	1,847	1,609
	Male	Person	1,480	1,135
	Female	Person	367	474
	<b>Below 30 years old</b>	Person	1,607	2,030
	Male	Person	1,093	1,129
	Female	Person	514	901
<b>Parental leave*</b>				
401-3	<b>No of employees entitled to parental leaves</b>	Person	6,971	6,204
	Male	Person	4,836	3,944
	Female	Person	2,135	2,260
	<b>No of employees who took parental leave</b>	Person	394	485
	Male	Person	200	132
	Female	Person	194	353
	<b>Number of employees who returned to work after taking parental leave</b>	Person	373	431
	Male	Person	194	132
	Female	Person	179	299
	<b>Retention to work (after parental leave and still employed for the next 12 months)</b>	Person	318	408
	Male	Person	173	128
	Female	Person	145	280
	<b>No of employees who returned after availing parental leave in previous reporting period</b>	Person	393	425
	Male	Person	185	134
	Female	Person	208	291
	Return to work rate	%	95%	89%
	Retention rate	%	81%	96%
	<b>Employees training*</b>			
404-1	<b>Total training hours provided to employee</b>	Hours	113,257	69,713
	Male	Hours	91,440	55,183
	Female	Hours	21,817	14,529
	<b>Total average training hours</b>	Hours/Employee	6.8	3.9
	Male <sup>#</sup>	Hours/Employee	8.1	4.4
	Female	Hours/Employee	4.2	2.7
<b>Performance review*</b>				
404-3	<b>Total employees receiving regular performance reviews</b>	Person	13,838	15,355
	Male	Person	9,982	10,456
	Female	Person	3,856	4,899
	<b>Percentage of employees receiving regular performance reviews (No. of Employees receiving review/total no. of employees)</b>	%	84%	86%
	Male	%	88%	84%
	Female	%	74%	92%

\* Does not include temporary employee. Temporary employee is an employee with a contract for a limited period (i.e., fixed term contract) that ends when the specific time period expires, or when the specific task or event that has an attached time estimate is completed (e.g., the end of a project or return of replaced employees).

<sup>#</sup>Restated number for 2021

# Occupational Health and Safety

GRI Standards	Employee	Unit	2022	2021
<b>Employee</b>				
GRI2-7a	<b>Total employees</b>	Person	21,207	19,153
	Male	Person	14,844	13,597
	Female	Person	6,364	5,556
GRI2-8	<b>Total contractor's employees</b>	Person	10,593	9,293
	Male	Person	8,988	7,758
	Female	Person	1,605	1,536
403-9	<b>Number of man-hours</b>	Man-hours	67,036,031	64,770,648
	<b>Employee</b>	Man-hours	41,271,898	43,192,969
	Male	Man-hours	29,016,310	31,004,766
	Female	Man-hours	12,255,588	12,188,203
	<b>Contractor</b>	Man-hours	25,764,133	21,577,680
	Male	Man-hours	21,921,670	17,848,727
	Female	Man-hours	3,842,463	3,728,953
<b>Worker training on occupational health and safety</b>				
403-5	Safety training programs conducted	No.	2,381	1,392
	Training hours permanent employees	Hours	100,665	58,360
	Training hours temporary employees	Hours	20,117	774
	Training hours contractor workers	Hours	40,361	28,836
	Average training hours per permanent employee	Hours	6.3	3.3
	Average training hours per temporary employee	Hours	4.3	0.6
	Average training hours per contractor worker	Hours	3.8	3.1
<b>Work - related injuries</b>				
403-9	<b>Fatalities</b>	Person	5	0
	<b>Employees</b>	Person	1	0
	Male	Person	1	0
	Female	Person	0	0
	<b>Contractor</b>	Person	4	0
	Male	Person	4	0
	Female	Person	0	0
	<b>Lost-Time Cases (LTC)^</b>	Cases	58	-
	<b>Employees</b>	Cases	50	-
	Male	Cases	36	-
	Female	Cases	14	-
	<b>Contractor</b>	Cases	8	-
	Male	Cases	8	-
	Female	Cases	0	-
	<b>Restricted Work Cases (RWC)^</b>	Cases	3	-
	<b>Employees</b>	Cases	3	-
	Male	Cases	3	-
	Female	Cases	0	-
	<b>Contractor</b>	Cases	0	-
	Male	Cases	0	-
	Female	Cases	0	-
	<b>Medical Treatment Cases^</b>	Cases	15	-
	<b>Employees</b>	Cases	9	-
	Male	Cases	3	-
	Female	Cases	6	-

^New disclosed KPI

GRI Standards	Employee	Unit	2022	2021
	<b>Contractor</b>	Cases	6	-
	Male	Cases	6	-
	Female	Cases	0	-
	<b>First Aid Cases (FAC)^</b>	Cases	320	-
	<b>Employees</b>	Cases	274	-
	Male	Cases	171	-
	Female	Cases	103	-
	<b>Contractor</b>	Cases	46	-
	Male	Cases	46	-
	Female	Cases	0	-
	<b>Total recordable injuries</b>	Cases	81	67
	<b>Employees</b>	Cases	63	60
	Male	Cases	43	26
	Female	Cases	20	34
	<b>Contractor</b>	Cases	18	7
	Male	Cases	18	6
	Female	Cases	0	1
	<b>Total lost time cases^</b>	Cases	66	-
	<b>Employees</b>	Cases	54	-
	Male	Cases	40	-
	Female	Cases	14	-
	<b>Contractor</b>	Cases	12	-
	Male	Cases	12	-
	Female	Cases	0	-
	<b>Total Loss Time Injury Frequency Rate (LTIFR)</b>	No./Million Man-Hours	0.98	0.54
	<b>Employees</b>	No./Million Man-Hours	1.31	0.76
	Male	No./Million Man-Hours	1.38	0.61
	Female	No./Million Man-Hours	1.14	1.15
	<b>Contractor</b>	No./Million Man-Hours	0.47	0.09
	Male	No./Million Man-Hours	0.55	0.11
	Female	No./Million Man-Hours	0.00	0.00
	<b>Total Recordable Injury Frequency Rate (TRIFR)</b>	No./Million Man-Hours	1.21	1.03
	<b>Employees</b>	No./Million Man-Hours	1.50	1.39
	Male	No./Million Man-Hours	1.50	0.84
	Female	No./Million Man-Hours	1.60	2.79
	<b>Contractor</b>	No./Million Man-Hours	0.70	0.32
	Male	No./Million Man-Hours	0.80	0.34
	Female	No./Million Man-Hours	0.00	0.27
	<b>Near misses^</b>	Cases	367	-
	<b>Employees</b>	Cases	149	-
	Male	Cases	145	-
	Female	Cases	4	-
	<b>Contractor</b>	Cases	218	-
	Male	Cases	218	-
	Female	Cases	0	-

^New disclosed KPI

# Occupational Health and Safety

GRI Standards	Employee	Unit	2022	2021
<b>Work - related ill health</b>				
403-10	<b>Fatalities as a result of work-related ill health</b>	Cases	0	0
	<b>Employees</b>	Cases	0	0
	Male	Cases	0	0
	Female	Cases	0	0
	<b>Contractor</b>	Cases	0	0
	Male	Cases	0	0
	Female	Cases	0	0
	<b>High consequence work-related injuries<sup>#</sup></b>	Cases	0	3
	<b>Employees<sup>#</sup></b>	Cases	0	3
	Male <sup>#</sup>	Cases	0	3
	Female	Cases	0	0
	<b>Contractor</b>	Cases	0	0
	Male	Cases	0	0
	Female	Cases	0	0
	<b>Recordable work-related ill health</b>	Cases	0	0
	<b>Employees</b>	Cases	0	0
	Male	Cases	0	0
	Female	Cases	0	0
	<b>Contractor</b>	Cases	0	0
	Male	Cases	0	0
	Female	Cases	0	0

# Restated numbers for 2021

# Indorama Corporation Governance Board

## Diversity in Governance Body (Board of Directors)

GRI Standards	Age Group	<50 years	50-60 years	>60 years
405-1	Number of members	1	1	4

## Number of Directors under Executive, Non-Executive and Independent Directors

GRI Standards	Executive	Non-Executive and Independent Directors
405-1	5	1

## Tenure of Board of Directors

GRI Standards	Tenure	<5 years	5-10 years	>10 years
405-1		0	1	5

Note: IRC – Please note that 1/3 of the directors retire by rotation at the Annual General Meeting with the option to be re-elected, pursuant to the Constitution of IRC.





## Independent Assurance Statement

To the Directors and Management,  
Indorama Corporation Pte. Ltd.,  
143 Cecil Street, #14-00 GB Building,  
Singapore –069542

Indorama Corporation Pte. Ltd. (hereafter IRC') commissioned TUV India Private Limited (TUVI) to conduct independent external assurance of non-financial information disclosed in IRC's Second Annual Sustainability Report (hereinafter 'the Report') for the period January 01, 2022 to December 31, 2022. This engagement was comprised of "limited assurance" of IRC's sustainability information for the applied reporting period. The Report is based on the principles of GRI Standards 2021. This assurance engagement was conducted in accordance with ISAE 3000 (revised).

### Management's Responsibility

IRC has monitored the ESG data and is responsible for identifying materiality, and related sustainability issues, establishing, reporting performance management, data management, and quality. The management of IRC is responsible for the information provided in the report and the process of collecting, analysing, and reporting the information presented in web-based and printed forms, including website maintenance and its integrity. The IRC's management is responsible for accurately monitoring and reporting the ESG data following the applied criteria so that it is free of intended or unintended material misstatements. IRC will be responsible for archiving and reproducing the disclosed data for the stakeholders upon request.

### Scope and Boundary

In particular, the assurance engagement included the following:

1. Verification of the application of the principles as mentioned in the Global Reporting Initiative (GRI) Standards, and the quality of information presented in the ESG data over the reporting period;
2. Review of the policies, initiatives, practices and performance described in the Report;
3. Review of the non-financial disclosures made in the Report against the requirements of the GRI Standards;
4. Verification of the reliability of the GRI Standards Disclosure on environmental and social topics by verifying sample data;
5. Specified information was selected based on the materiality determination and needs to be meaningful to the intended users.

TUVI has verified the below-mentioned disclosures given in the report.

Topic	Indicator	GRI Disclosure
Energy	Energy consumption within the organization	302-1
	Energy intensity	302-3
Water and effluents	Water withdrawal	303-3
Emissions	Direct (Scope 1) GHG emissions*	305-1
	Energy indirect (Scope 2) GHG emissions	305-2
Waste	Waste generated	306-3
	Waste diverted from disposal	306-4
	Waste directed to disposal	306-5
Occupational health and safety	Work-related injuries	403-9
Training and education	Average hours of training per year per employee	404-1

\* All GHG sources under Scope -1 emissions are not calculated example fugitive emissions from refrigerant, refill of fire extinguishers, LPG consumption in canteen, emissions on account of use of fertilizers. GHG reporting is limited to scope 1 and 2.

The reporting boundaries for the above topics include 30 manufacturing plants across 8 countries. Onsite Assessment was performed for below mentioned sites

1. Indorama India Private Limited, Fertilizer Division, Haldia, India - 03-05 July 2023
2. Indorama India Private Limited, Fertilizer Division, Haldia, India - 06-08 July 2023
3. PT. Indo-Rama Synthetics Tbk, Purwakarta, Indonesia - 17-18 July 2023
4. PT. Indo-Rama Synthetics Tbk, Campaka Purwakarta – 20 July 2023
5. PT. Indo-Rama Synthetics Tbk. Bandung – 21 July 2023
6. F.E. Indorama Kokand Textile JSC, Uzbekistan – 24-26 July 2023
7. JSC Indorama Kokand Fertilizers & Chemicals Uzbekistan - 27-28 July 2023

The assurance activities were done together with a desk review carried out for all other IRC sites within the reporting boundary. Applicable boundaries for disclosures are explained in the Report.

### Limitations

TUVI did not perform any assurance procedures on the prospective information disclosed in the ESG data, including targets, expectations, and ambitions. Consequently, TUVI draws no conclusion from the prospective information. During the assurance process, TUVI did not come across any limitations to the agreed scope of the assurance engagement. TUVI is contracted by the IRC and answerable to the IRC's management only. TUVI verified the data on a sample basis; the responsibility for the authenticity of the data entirely lies with IRC. TUVI expressly disclaims any liability or co-responsibility in the case of erroneous data reported or for any decision a person or entity would make based on this assurance statement.

### Our Responsibility

TUVI's responsibility in relation to this engagement was to perform a limited level of assurance and to express a conclusion based on the work performed. This engagement did not include an assessment of the adequacy or the effectiveness of IRC's strategy or management of sustainability-related issues or the sufficiency of the report against GRI Standards, ISAE 3000 (revised) standard and other requirements mentioned under the scope of the assurance. TUVI's responsibility regarding this verification is in accordance with the agreed scope of work which includes non-financial quantitative and qualitative information disclosed by IRC. The intended users of this assurance statement are the management of 'IRC'. This assurance engagement is based on the assumption that the data and information provided to us by IRC are complete and true.

### Verification Methodology

During the assurance engagement, TUVI adopted a risk-based approach, focusing on verification efforts with respect to disclosures. TUVI has verified the disclosures and assessed the robustness of the underlying data management system, information flows, and controls. In doing so:

1. TUVI examined and reviewed the documents, data, and other information made available by IRC for non-financial disclosures;
2. TUVI conducted interviews with key representatives, including data owners and decision-makers from different functions of IRC;
3. TUVI reviewed the level of adherence to principles of GRI standards.
4. TUVI examined and reviewed the documents, data (on sample basis) and other information made available by IRC for the reported disclosures including the Management Approach and performance disclosure

### Opportunities for Improvement

The following are the opportunities for improvement reported to IRC. However, they are generally consistent with IRC's management objectives and programs.

1. A formal assessment of the Human Rights can be conducted to strengthen the disclosure
2. IRC can perform a detailed climate risk analysis applicable to entire supply chain starting from raw material extraction, transport, manufacturing, testing, packaging, finish good transport, use phase and end of life
3. Equipment wise GHG mapping can be developed for each IRC location to identify the hot spots and accordingly design the structured and focused mitigation measures
4. IRC is targeting the net zero carbon, thus its existing policies focusing on the GHG and energy can be updated and inform to stakeholders along with the targets and timelines.

5. IRC may strengthen its internal reporting by opting a smart cloud based data management system and compliment the same with periodic internal data and performance reviews

### Our Conclusion

In our opinion, based on the scope of this assurance engagement, the disclosures on ESG performance reported along with the referenced information provides a fair representation of the material topics, monitoring systems, strategies, and performance disclosures and meets the general content and quality requirements of the GRI Standards.

**Disclosures:** TUVI is of the opinion that the reported disclosures generally meet the GRI Standards reporting requirements. IRC refers to general disclosure to report contextual information about IRC, while the Management Approach is discussed to report the management approach for each material topic.

**Universal Standard:** IRC followed GRI 1: Foundation 2021: Requirements and principles for using the GRI Standards; GRI 2: General Disclosures 2021: Disclosures about the reporting organization. General Disclosures were followed when reporting information about an Organization's profile, strategy, ethics and integrity, governance, stakeholder engagement practices and reporting process and GRI 3: Material Topics 2021: Disclosures and guidance about the organization's material topics. GRI3 was selected for Management's Approach on reporting information about how an organization manages a material topic.

**Topic Specific Standard:** 300 series (Environmental topics), and 400 series (Social topics). These Topic-specific Standards were used to report information on the organization's impacts related to environmental and social topics. *TUVI is of the opinion that the reported material topics and Topic-specific Standards that IRC used to prepare its Report are appropriately identified and addressed.*

**Limited Assurance Conclusion:** Based on the procedures we have performed, nothing has come to our attention that causes us to believe that the information subject to the limited assurance engagement was not prepared in all material respects. TUVI found the sustainability information to be reliable in all material respects, with regards to the reporting criteria of the GRI Standards.

This assurance statement has been prepared in accordance with the terms of our engagement. In accordance to the ISAE 3000 (revised) requirements

**Independence:** TUVI follows IESBA (International Ethics Standards Board for Accountants) Code which, adopts a threats and safeguards approach to independence. It is confirmed that the Assurance Team is selected to avoid situations of self-interest, self-review, advocacy and familiarity. The Assessment Team was safeguarded from any type of intimidation.

**Quality control:** The Assurance Team complies with the Code of Ethics for Professional Accountants issued by the IESBA, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. In accordance with International Standard on Quality Control, TUVI maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

In the context of Assurance, the following contemporary principles has been observed:

#### Evaluation of the adherence to other contemporary Principles

**Inclusivity:** Stakeholder identification and engagement is carried out by IRC on a periodic basis to bring out key stakeholder concerns as material topics of significant stakeholders. In our view, the Report meets the requirements.

**Materiality:** The materiality assessment process has been carried out based on the requirements of the GRI Standards, considering topics that are internal and external to the IRC range of businesses. The Report fairly brings out the aspects and topics and their respective boundaries of the diverse operations of IRC. In our view, the Report meets the requirements.

**Responsiveness:** TUVI believes that the responses to the material aspects are fairly articulated in the report, i.e., disclosures on IRC policies and management systems, including governance. In our view, the Report meets the requirements.

**Impact:** IRC communicates its sustainability performance through regular, transparent internal and external reporting throughout the year, aligned with GRI, and its policy framework encompassing the Environmental, Social, Ethical and other policies. IRC reports on sustainability performance to the Top Management, who oversees and monitors the implementation and performance of objectives, as well as progress against goals and targets for addressing sustainability-related issues.

TUVI expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement. The intended users of this assurance statement are the Management of IRC. The Management of the IRC is responsible for the information provided in the Report as well as the process of collecting, analyzing, and reporting the information presented in web-based and printed Reports, including website maintenance and its integrity. TUVI's responsibility regarding this verification is in accordance with the agreed scope of work which includes non-financial quantitative and qualitative information (Sustainability Performance) disclosed by IRC in the Report. This assurance engagement is based on the assumption that the data and the information provided to TUVI by IRC are complete and true.

### Our Assurance Team and Independence

TUVI is an independent, neutral third party providing sustainability services with qualified environmental and social specialists. TUVI states its independence and impartiality and confirms that there is "No Conflict of Interest" with regard to this assurance engagement. In the reporting year, TUVI did not work with IRC on any engagement that could compromise the independence or impartiality of our findings, conclusions, and recommendations. TUVI was not involved in the preparation of any content or data included in the Report, with the exception of this Assurance Statement. TUVI maintains complete impartiality towards any individuals interviewed during the assurance engagement.

#### For and on behalf of TUV India Private Limited



Manojkumar Borekar  
Project Manager and Reviewer  
Head – Sustainability Assurance Service



Date: 24-08-2023  
Place: Mumbai, India

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8121633133  
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8121599824

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# GRI Content Index

Topic	GRI Disclosure	Description	Section	Page No./ Reference	Exclusion
The organization and its reporting practices	2-1	Organizational details	About Indorama Corporation	3	
	2-2	Entities included in the organization's sustainability reporting	Factbook	2	
	2-3	Reporting period, frequency and contact point	About the Report	1	
	2-4	Restatements of information		No restatements	
	2-5	External assurance	Assurance statement	Inside Back Cover	
Activities and workers	2-6	Activities, value chain and other business relationships	About Indorama Corporation	3-4	
	2-7	Employees	Social	22	
Governance	2-10	Nomination and selection of the highest governance body	Governance	26-27	
	2-11	Chair of the highest governance body	Governance	26-27	
	2-9	Governance structure and composition	Governance	26	
	2-12	Role of the highest governance body in overseeing the management of impacts	Governance	26-27	
	2-14	Role of the highest governance body in sustainability reporting	Governance	26-27	
	2-19	Remuneration policies	Human Rights and Labour Policy	<a href="#">Link</a>	
	2-20	Process to determine remuneration	Human Rights and Labour Policy	<a href="#">Link</a>	
Strategy, policies and practices	2-22	Statement on sustainable development strategy	Chairman and Vice Chairman message	6,7	
Stakeholder engagement	2-29	Approach to stakeholder engagement	Stakeholder Engagement	10	
<b>Topic Specific Standard</b>					
Economic Performance	200				
203: Indirect Economic Impacts 2016	GRI 3	Management Disclosure	Materiality	11	
	203-1	Infrastructure investments and services supported	Social	25	
	203-2	Significant indirect economic impacts	Social	25	
207: Tax 2019	GRI 3	Management Disclosure	Materiality	11	207-1, 207-2, 207-4
	207-3	Stakeholder engagement and management of concerns related to tax	Stakeholder Engagement	10	
<b>Topic Specific Standard</b>					
Environment	300				
301: Materials 2016	GRI 3	Management Disclosure	Megatrends - Raw Material Availability	13	301-1, 301-3, 302-5
	301-2	Recycled input materials used	Megatrends - Raw Material Availability	13	
302: Energy 2016	GRI 3	Management Disclosure	Materiality	11	302-3
	302-1	Energy consumption within the organization	Factbook: Energy	4	
	302-3	Energy intensity	Sustainability Highlights 2022	2	
	302-4	Reduction of energy consumption	Energy and climate change	14-16	
303: Water and Effluents 2018	GRI 3	Management Disclosure	Materiality	11	
	303-1	Interactions with water as a shared resource	Factbook: Water	6	
	303-2	Management of water discharge-related impacts	Waste and Effluents	18-19	

Topic	GRI Disclosure	Description	Section	Page No./ Reference	Exclusion
	303-3	Water withdrawal	Sustainability Highlights 2022	2	
	303-4	Water discharge	Factbook: Water	6	
	303-5	Water consumption	Factbook: Water	6	
304: Biodiversity 2016	GRI 3	Management Disclosure	Materiality	11	
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity	17	304-3, 304-4
	304-2	Significant impacts of activities, products and services on biodiversity	Biodiversity	17	
	305: Emissions 2016	GRI 3	Management Disclosure	Materiality	11
	305-1	Direct (Scope 1) GHG emissions	Factbook: Emissions	5	
	305-2	Energy indirect (Scope 2) GHG emissions	Factbook: Emissions	5	
	305-4	GHG emissions intensity	Sustainability highlights 2022; Factbook	2,5	
	306: Waste 2020	GRI 3	Management Disclosure	Materiality	11
	306-2	Management of significant waste related impacts	Waste Management	19	
	306-3	Waste generated	Factbook: Waste	7	
	306-4	Waste diverted from disposal	Sustainability Highlights 2022; Factbook	2, 7	
	306-5	Waste directed to disposal	Factbook: Waste	7	
	<b>Topic Specific Disclosure</b>				
Social	400				
401: Employment 2016	GRI 3	Management Disclosure	Materiality	11	401-2
	401-1	New employee hires and employee turnover	Factbook: Employees	8-9	
	401-3	Parental leave	Factbook: Employees	9	
403: Occupational Health and Safety 2018	GRI 3	Management Disclosure	Materiality	11	
	403-1	Occupational health and safety management system	Occupational health and safety	20-21	
	403-2	Hazard identification, risk assessment, and incident investigation	Occupational health and safety	20-21	
	403-3	Occupational health services	Occupational Health and Safety	20-21	
	403-4	Worker participation, consultation, and communication on occupational health and safety	Occupational health and safety	20-21	
	403-5	Worker training on occupational health and safety	Factbook: Occupational Health and Safety	20-21	
	403-6	Promotion of worker health	Occupational health and safety	20-21	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Occupational health and safety	20-21	
	403-8	Workers covered by an occupational health and safety management system	Factbook: Occupational Health and Safety	10-11	
	403-9	Work-related injuries	Occupational health and safety; Factbook	20, 10-11	
403-10	Work-related ill health	Factbook: Occupational Health and Safety	12		



Topic	GRI Disclosure	Description	Section	Page No./ Reference	Exclusion
404: Training and Education 2016	GRI 3	Management Disclosure	Materiality	11	404-3
	404-1	Average hours of training per year per employee	Factbook: Employees, Social	21, 9	
	404-2	Programs for upgrading employee skills and transition assistance programs	Human Capital and Diversity	22-23	
405: Diversity and Equal Opportunity 2016	GRI 3	Management Disclosure			
	405-1	Diversity of governance bodies and employees	Factbook: Governance	13	405-2
408: Child Labor 2016	GRI 3	Management Disclosure	Materiality	11	
	408-1	Operations and suppliers at significant risk for incidents of child labor	Human Rights and Labor	21	
409: Forced or Compulsory Labor 2016	GRI 3	Management Disclosure	Materiality	11	
	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Human Rights and Labor	21	
413: Local Communities 2016	GRI 3	Management Disclosure	Materiality	11	413-2
	413-1	Operations with local community engagement, impact assessments, and development programs	Community Development	24-25	







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