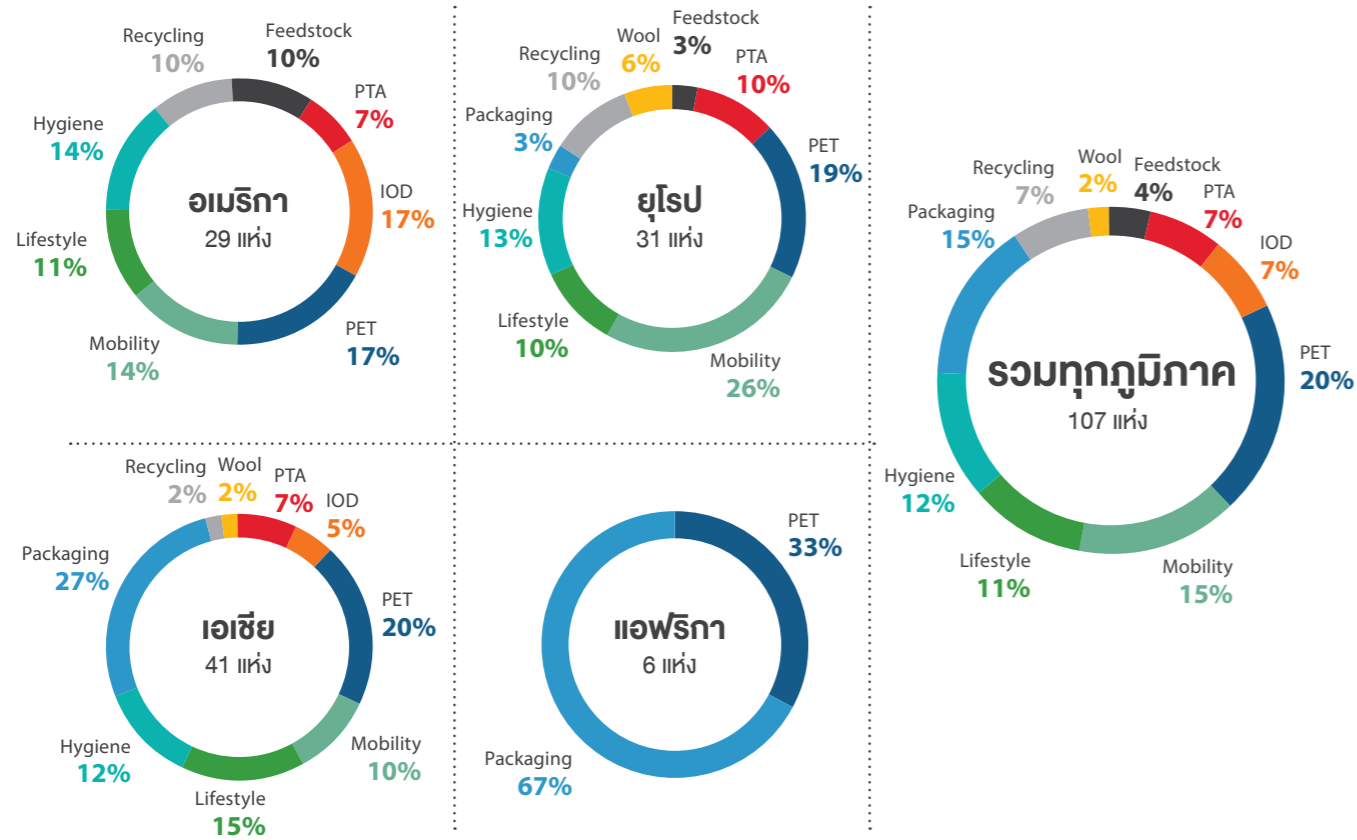


# ข้อมูลผลการดำเนินงานทั่วโลก

รายงานความยั่งยืนประจำปี 2563 นี้ครอบคลุมพื้นที่ดำเนินงานของโรงงานในกลุ่มธุรกิจทั้งหมดของบริษัท 107 แห่งทั่วโลกในทุกหน่วยธุรกิจ ได้แก่ PET สารตั้งต้น (PTA, PIA, EO/EG, PX, NDC) IOD เส้นใย บรรจุกักเก็บ การรีไซเคิล และเส้นด้ายขนสัตว์ โดยแบ่งตามภูมิภาคดังต่อไปนี้



## ความครอบคลุมของการรวบรวมข้อมูล (ร้อยละของการผลิตของโอวีแอลทั่วโลก)

Material Indicators	2560	2561	2562	2563
Total energy consumption	100	100	100	100
Direct GHG Emissions Scope 1	100	100	100	100
Indirect GHG Emissions Scope 2	100	100	100	100
Total NOx Emissions	100	100	100	100
Total SOx Emissions	100	100	100	100
Total VOC Emissions	100	100	100	100
Total waste (excluding reused and recycled)	100	100	100	100
COD in treated wastewater discharged	100	100	100	100
BOD in treated wastewater discharged	100	100	100	100
Total water withdrawn by sources	100	100	100	100
Wastewater discharge	100	100	100	100
Health & safety	100	100	100	100
Process safety events	30	50	100	100
Spills	100	100	100	100
CSR	91	94	88.3	91
HR	100	100	100	100

## ข้อมูลของโรงงานที่มีการระบุไว้ในรายงานความยั่งยืนปี 2563

Region / Operation	Country	Business
<b>Americas</b>		
AlphaPet, Inc.	USA	●
Auriga Polymers Inc.	USA	●●
Avgol America Inc.	USA	●
FiberVisions Manufacturing Company	USA	●
FiberVisions Products Products, Inc.	USA	●
Indorama Ventures (Oxide & Glycols) LLC	USA	●
Indorama Ventures Fibras Brazil Ltda	Brazil	●
Indorama Ventures Olefins LLC	USA	●
Indorama Ventures Oxides International LLC	USA	●
Indorama Ventures Oxides LLC	USA	●
Indorama Ventures Polymers Mexico, S. de R.L. de C.V.	Mexico	●●
Indorama Ventures Polymeros S.A.	Brazil	●
Indorama Ventures Propylene Oxides LLC	USA	●
Indorama Ventures PTA Montreal LP	Canada	●
Indorama Ventures Solucoes Sustentaveis Brasil Ltda.	Brazil	●
Indorama Ventures Sustainable Solutions LLC	USA	●
Indorama Ventures Sustainable Solutions Fontana Inc.	USA	●
Indorama Ventures Xylenes and PTA LLC	USA	●●●● NDC, PIA, PX
Performance Fibers Operations Mexico, S. de R.L. de C.V.	Mexico	●
PHP Fibers Inc.	USA	●
Sinterama do Brazil Ltda.	Brazil	●
StarPet Inc.	USA	●
UTT de México Technical Textiles S.A. de C.V.	Mexico	●
Winnsboro Fibres LLC	USA	●
<b>Europe</b>		
Avgol Limited Liability Company	Russia	●
Beverage Plastics Limited	Northern Ireland	●
FiberVisions A/S	Denmark	●
Glanzstoff Bohemia s.r.o.	Czech Republic	●
Glanzstoff Industries S.R.L.	Italy	●
Glanzstoff Longlaville S.A.S.	France	●
Indorama Ventures Corlu PET Sanayi Anonim Sirketi	Turkey	●
Indorama Ventures Europe B.V.	The Netherlands	●●
Indorama Ventures Poland Sp. z o.o.	Poland	●
Indorama Ventures Polymers Germany GmbH	Germany	●
Indorama Ventures Portugal PTA - Unipessoal, LDA.	Portugal	●
Indorama Ventures Quimica S.L.U.	Spain	●●● PIA
Kordárna Plus a.s.	Czech Republic	●
Kordárna Plus a.s.	Slovakia	●
PHP Fibers GmbH	Germany	●
Schoeller GmbH & Co KG	Austria	●
Schoeller Kresice s.r.o.	Czech Republic	●
Sinterama Bulgaria EOOD	Bulgaria	●
Sinterama S.p.A.	Italy	●
Textilcord Steinfurt S.A.*	Luxembourg	●
Trevira GmbH, Bobingen	Germany	●
Trevira GmbH, Guben	Germany	●
UAB Orion Global Pet	Lithuania	●
UTT Technische Textilien GmbH & Co.	Germany	●
Wellman France Recyclage S.A.S	France	●
Wellman International Limited, Ireland	Ireland	●
Wellman International Limited, The Netherlands	The Netherlands	●
Wellman Neufchâteau Recyclage S.A.	France	●

Region / Operation	Country	Business
<b>Asia</b>		
Asia Pet (Thailand) Limited	Thailand	●
Avgol India Private Limited	India	●
Avgol Limited (Bagan)	Israel	●
Avgol Limited (Dimona)	Israel	●
FiberVisions (China) Textiles Products Limited	China	●
Glanzstoff Industries (Qingdao) Co., Ltd.	China	●
Guangdong IVL PET Polymer Company Limited	China	●
Hubei Gold Dragon Nonwoven Fabrics Co. Ltd.**	China	●
Inorama Holdings Limited	Thailand	●
Inorama Petrochem Limited	Thailand	●
Inorama Petrochem Limited (2 <sup>nd</sup> Branch)	Thailand	●
Inorama Polyester Industries Public Company Limited, Nakhon Pathom	Thailand	● ●
Inorama Polyester Industries Public Company Limited, Rayong	Thailand	● ●
Indo Rama Synthetics (India) Limited	India	●
Inorama Ventures Oxides Ankleshwar Private Limited	India	●
Inorama Ventures Oxides Australia Pty Limited	Australia	●
Inorama Ventures Packaging (Myanmar) Limited	Myanmar	●
Inorama Ventures Packaging (Philippines) Corporation, Bacolod	The Philippines	●
Inorama Ventures Packaging (Philippines) Corporation, Batino	The Philippines	●
Inorama Ventures Packaging (Philippines) Corporation, Davao	The Philippines	●
Inorama Ventures Packaging (Philippines) Corporation, Meycauyan	The Philippines	●
Inorama Ventures Packaging (Philippines) Corporation, MOP	The Philippines	●
IVL Dhunseri Petrochem Industries Private Limited (Haldia)	India	●
IVL Dhunseri Petrochem Industries Private Limited (Panipat)	India	●
Performance Fibers (Kaiping) Company Limited	China	●
Performance Fibers (Kaiping) No.2 Company Limited	China	●
Performance Fibers (Kaiping) No.3 Company Limited	China	●
Petform (Thailand) Limited, Korat	Thailand	●
Petform (Thailand) Limited, Lopburi	Thailand	● ●
Petform (Thailand) Limited, Pathumthani	Thailand	●
Petform (Thailand) Limited, Rayong	Thailand	●
PT Inorama Petrochemicals	Indonesia	●
PT Inorama Polychem Indonesia	Indonesia	●
PT Inorama Polypet Indonesia	Indonesia	●
PT Inorama Ventures Indonesia	Indonesia	● ●
Sinterama Yarns (Dongguan) Co., Ltd.	China	●
TPT Petrochemicals Public Company Limited	Thailand	●
<b>Africa</b>		
Bevpak (Nigeria) Limited	Nigeria	●
Egyptian Indian Polyester Company S.A.E.	Egypt	●
Inorama PET (Nigeria) Limited	Nigeria	●
Inorama Ventures Packaging (Ghana) Limited	Ghana	●
Inorama Ventures Packaging (Nigeria) Limited	Nigeria	●
Medco Plast Co. for Packing & Packaging Systems (S.A.E.)	Egypt	●

Remark:

● Feedstock ● PTA ● IOD ● PET ● Hygiene ● Lifestyle ● Mobility ● Packaging ● Recycling ● Wool

Business Verticals: **Combined PET** – Feedstock, PTA, PET, Packaging, Recycling

**Fibers** – Fibers (Hygiene, Lifestyle and Mobility) and Wool

**Integrated Oxides and Derivatives** – IOD

NDC Naphthalene Dicarboxylate

PIA Purified Isophthalic Acid

PX Paraxylene

\* One of the five Glanzstoff sites, the other four are Glanzstoff Bohemia and Glanzstoff Industries S.R.L., Glanzstoff Industries (Qingdao) and Glanzstoff Longlaville S.A.S.

\*\* One of the five Avgol sites, the other four are Avgol America Inc., Avgol India Private Limited, Avgol Limited Liability Company, Avgol Limited (Bagan) and Avgol Limited (Dimona)

## Global Performance Data

GRI Standards		Unit	2560	2561	2562	2563
<b>Production</b>						
General	Total production (captive consumption)	Ton of production	10,004,534	11,338,992	12,780,005	15,551,483
	PET	Ton	3,648,922	4,211,040	5,167,714	5,356,444
	PTA	Ton	3,735,362	4,192,671	4,191,627	4,243,812
	Packaging	Ton	134,838	155,319	226,184	223,333
	Fibers	Ton	1,320,941	1,438,564	1,850,305	1,757,260
	Feedstock (PIA/PX/NDC)	Ton	1,057,123	1,236,703	880,183	793,167
	Wool	Ton	2,188	2,712	6,622	4,600
	Recycling Plants Production (flakes+in process reuse)	Ton	105,160	101,983	149,734	155,586
	IOD	Ton	-	-	307,634	3,017,281
<b>Revenue</b>						
General	Total revenues (including inter-company sales)	USD (million)	10,575	12,933	14,089	13,769
<b>Materials</b>						
301-1	Total material used	Ton	10,656,101	11,418,542	13,058,127	15,019,567
	Raw materials					
	- PTA	Ton	4,061,686	4,281,652	5,195,207	5,260,904
	- MEG	Ton	1,492,315	1,647,427	2,034,280	2,071,956
	- Paraxylene	Ton	2,452,829	2,755,828	2,751,180	2,785,304
	- IOD raw materials	Ton	-	-	-	1,532,558
	- Acetic Acid	Ton	139,606	162,234	168,183	154,037
	- Purified isophthalic acid	Ton	64,042	70,510	88,511	96,462
	- PET	Ton	259,809	302,396	405,181	398,514
	- PP	Ton	123,825	118,622	274,540	274,328
	- PE	Ton	37,193	67,172	55,494	56,757
	- HDPE	Ton	5,481	7,134	9,140	8,211
	- Wool	Ton	2,521	2,600	5,096	3,400
	- Cardboard packaging	Ton	39,556	3,516	57,745	5,006
	- Partially oriented yarn (POY) + Textile grade chips	Ton	21,150	0	4,009	13,693
	Bio-raw materials					
	- Bio-MEG	Ton	7,447	15,808	9,130	10,031
	- Cellulose	Ton	11,043	11,004	10,079	7,212
	- PLA	Ton	2,383	1,088	2,023	3,641
	Others	Ton	1,791,707	1,830,309	1,781,332	2,106,641
301-2	Total recycled materials	Ton	143,507	141,242	206,996	230,912
<b>Energy</b>						
302-1	Total energy consumption	GJ	55,070,650	59,984,718	73,452,756	104,724,983
	• Fuel oil	GJ	89,531	109,772	308,901	431,744
	• Natural gas	GJ	23,905,980	28,089,267	31,777,505	64,265,634
	• LPG	GJ	71,919	60,629	69,024	57,672
	• Diesel	GJ	90,493	150,835	188,489	252,356
	• Gasoline	GJ	31,971	30,422	28,782	41,100
	• Fuel gas	GJ	31,676	7,709	-	-
	• Coal	GJ	13,921,799	14,143,189	23,190,958	20,796,788
	• Other	GJ	27,371	101,404	66,495	80,444
	• Renewable energy consumption	GJ	1,348,403	1,324,546	1,086,515	1,051,628
	Biomass	GJ	855,872	901,065	658,703	618,312
	Biogas	GJ	492,531	423,481	427,812	433,316
	• Direct energy sold	GJ	(1,416,948)	(1,961,330)	(2,422,922)	(3,077,614)
	Total indirect energy consumption (electricity, cooling, steam purchased from outside of IVL group)	GJ	16,968,455	17,928,274	19,159,008	20,825,231
		MWh	4,713,460	4,980,076	5,321,947	5,784,786
	- Electricity purchased from conventional sources (e.g. natural gas, coal, nuclear, heating oil)	GJ	11,934,309	12,684,116	14,060,847	15,353,390
		MWh	3,315,086	3,523,366	3,905,791	4,264,831
	- Purchased steam	GJ	3,763,243	3,723,250	3,492,387	4,803,741
		MWh	1,045,345	1,034,236	970,108	1,334,372
	- Purchased heating	GJ	414,514	428,143	489,516	461,978
		MWh	115,143	118,929	135,977	128,327
	- Purchased cooling	GJ	371,063	300,998	292,655	222,781
		MWh	103,073	83,611	81,293	61,884
	- Renewable electricity generated and consumed	GJ	6,237	6,072	11,964	23,326
		MWh	1,733	1,687	3,323	6,479
	- Renewable electricity purchased through certificate	GJ	1,221,327	1,423,629	1,489,077	667,280
		MWh	339,257	395,453	413,633	185,356
	Total direct electricity sold	GJ	421,526	417,225	396,190	428,058



GRI Standards		Unit	2560	2561	2562	2563
	Total steam sold	MWh	117,091	115,896	110,053	118,905
		GJ	257,933	165,745	221,703	215,102
	Total indirect electricity sold	MWh	71,648	46,040	61,584	59,751
		GJ	62,778	54,964	59,547	64,105
		MWh	17,438	15,268	16,541	17,807
302-3	Energy intensity	GJ/Ton of production	5.50	5.29	5.75	6.73
302-4	Energy saved due to conservation and efficiency improvement	GJ	614,892	416,617	756,216	435,645
<b>Water Withdrawal and Consumption</b>						
303-1	Total water withdrawn by sources	m <sup>3</sup>	53,552,616	60,285,763	65,222,820	82,504,769
	- Surface water	m <sup>3</sup>	32,036,781	34,920,909	35,480,047	51,035,459
	- Once through cooling water	m <sup>3</sup>	2,533,355	1,681,646	263,010	-
	- Municipal water and water utilities	m <sup>3</sup>	13,630,142	18,229,684	21,826,915	18,123,024
	- Groundwater	m <sup>3</sup>	5,263,939	5,341,836	7,630,654	12,661,456
	- Rainwater	m <sup>3</sup>	88,398	111,689	22,194	-
	Water intensity	m <sup>3</sup> /Ton of production	5.35	5.32	5.10	5.31
<b>Reused / Recycled Water</b>						
303-3	Total volume of recycled/reused water	m <sup>3</sup>	4,699,568	5,292,534	5,255,856	5,786,158
	% of recycled/reused water	%	8.07	8.07	7.46	6.55
<b>Emissions</b>						
305-1	Direct GHG emissions of all sources owned or controlled by company (Scope 1 emissions)	tCO <sub>2</sub> e	3,211,409	3,688,970	4,744,746	7,035,992
305-2	Indirect GHG emissions resulting from the generation of electricity, heat, or steam (Scope 2 emissions)	tCO <sub>2</sub> e	2,316,591	2,224,494	2,344,695	2,409,061
	Total GHG emissions (Scope 1 + Scope 2)	tCO <sub>2</sub> e	5,528,000	5,913,464	7,089,441	9,445,053
305-4	Scope 1 GHG intensity	tCO <sub>2</sub> e/Ton of production	0.321	0.325	0.371	0.452
	Scope 2 GHG intensity	tCO <sub>2</sub> e/Ton of production	0.232	0.197	0.184	0.156
	Scope 1 + Scope 2 GHG intensity	tCO <sub>2</sub> e/Ton of production	0.553	0.522	0.555	0.607
	"GHG intensity in tons of CO <sub>2</sub> e per currency total revenue"	tCO <sub>2</sub> e/USD (million)	522.74	457.24	503.19	685.97
	GHG Intensity in tons of CO <sub>2</sub> e per full time equivalent (FTE) employees	tCO <sub>2</sub> e/FTE	363.80	371.40	312.37	374.70
305-7	Total NO <sub>x</sub> emissions	Ton	2,559	2,879	4,659	4,937
	Total SO <sub>x</sub> emissions	Ton	1,518	1,970	4,993	4,658
	Total VOC emissions	Ton	2,078	4,642	2,123	3,298
	Total PM emissions	Ton	423	639	1,136	872
<b>Wastewater Discharge</b>						
306-1	Total water discharge volume	m <sup>3</sup>	32,222,930	33,659,202	28,812,422	48,753,356
	COD in treated wastewater discharged	Ton	1,542	2,357	1,693	12,560
	BOD in treated wastewater discharged	Ton	100	357	328	1,347
	TSS in treated wastewater discharged	Ton	295	478	532	1,540
	Oil and grease in treated wastewater discharged	Ton	15.60	16.70	20.45	124
	COD in untreated wastewater discharged to third party	Ton	4,090	4,374	2,578	2,861
	BOD in untreated wastewater discharged to third party	Ton	888	793	420	538
	TSS in untreated wastewater discharged to third party	Ton	421	302	146	139
	Oil and grease in treated wastewater discharged to third party	Ton	8.01	5.41	5.79	7.28
<b>Solid Waste</b>						
306-2	Total hazardous waste	Ton	54,001	51,379	74,344	117,157
	- Reuse	Ton	30,248	28,959	43,574	39,840
	- Recycling	Ton	4,725	2,960	4,796	2,511
	- Recovery (including energy recovery)	Ton	1,748	2,188	2,542	52,439
	- Composting	Ton	-	-	0	77
	- Incineration	Ton	11,183	9,616	9,996	12,900
	- Landfill	Ton	5,376	7,349	12,260	6,416
	- Others	Ton	721	306	1,175	2,973
	Total non-hazardous waste	Ton	110,151	119,570	243,104	197,669
	- Reuse	Ton	5,810	7,960	120,151	65,318
	- Recycling	Ton	36,616	43,990	43,423	50,505
	- Recovery (including energy recovery)	Ton	5,919	11,959	12,835	10,245
	- Composting	Ton	5,911	6,850	11,235	12,829
	- Incineration	Ton	1,367	1,080	1,080	2,425
	- Landfill (General waste)	Ton	35,746	38,609	49,596	53,603
	- Deepwell injection	Ton	--	--	--	53
	- Others	Ton	18,781	9,122	4,784	2,692
	Total Reused, Recycled and Recovered Waste	Ton	85,066	98,017	227,321	220,857
	Total waste disposed (not Reused, Recycled or Recovered)	Ton	79,086	72,932	90,127	93,969
306-4	Total weight of hazardous waste transported	Ton	57,724	48,388	67,709	56,733
	Total weight of hazardous waste treated	Ton	5,530	5,985	1,821	16,249
	The total weight of hazardous waste shipped internationally	Ton	183	362	261	258

GRI Standards		Unit	2560	2561	2562	2563
<b>Spills</b>						
306-3	Total significant spills	Case	42	18	20	25
		Ton	513	28	89	49
	- Hydrocarbon spills	Case	4	5	6	18
		Ton	7	13	6	33
	- Chemical spills	Case	26	13	14	7
		Ton	30	15	83	17
	- Other spills	Case	12	0	0	0
		Ton	476	0	0	0
<b>Process Safety Events</b>						
	Tier 1					
	- No. of events	Case	5	8	24	18
	- Rate	Case/Million man-hours	0.48	0.43	0.44	0.32
	Tier 2					
	- No. of events	Case	3	4	14	13
	- Rate	Case/Million man-hours	0.29	0.21	0.26	0.23
<b>Environmental Compliance</b>						
307-1	ALL FINES: Monetary value of ALL fines for non-compliance with environmental laws and regulations	USD	54,618	36,607	0	22,947
	FINES OVER USD 10,000: Monetary value of significant fines over USD 10,000 for non-compliance with environmental laws and regulations	USD	42,866	36,607	0	22,357
	Total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Case	0	0	0	0
	Total number of non-monetary sanctions for non-compliance with environmental laws and regulations were incurred	Case	0	0	0	0
<b>Employees</b>						
102-8	Total employees	Person	15,195	15,922	22,696	25,207
	- Male	Person	11,844	12,524	17,749	19,790
	- Female	Person	3,351	3,398	4,947	5,417
	Total contractors	Person	2,115	3,234	6,904	6,475
	- Male	Person	1,704	2,730	6,137	5,661
	- Female	Person	411	504	767	814
<b>Occupational Health and Safety</b>						
403-1	Total workforce represented in formal joint management - worker health and safety committees	Person	12,461	13,118	19,310	23,140
	Percentage of workforce represented in formal joint management - worker health and safety committees	%	82.01	82.39	91.43	91.80
403-2	Total Recordable Injury Rate (TRIR)	No/200,000 man-hours	1.19	1.29	1.45	0.91
	Employees	No/200,000 man-hours	1.21	1.41	1.59	0.99
	- Male	No/200,000 man-hours	1.41	1.52	1.60	1.02
	- Female	No/200,000 man-hours	0.50	0.98	1.57	0.86
	Contractors	No/200,000 man-hours	1.10	0.78	0.96	0.68
	- Male	No/200,000 man-hours	1.35	0.87	0.96	0.66
	- Female	No/200,000 man-hours	0	0.33	0.99	0.85
	"Total Recordable Injuries (not including first aid incidents)"	Case	206	241	394	259
	Employees	Case	176	214	335	209
	- Male	Case	160	184	270	174
	- Female	Case	16	30	65	35
	Contractors	Case	30	27	59	50
	- Male	Case	30	25	52	44
	- Female	Case	0	2	7	6
	Lost Time Injury Frequency Rate (LTIFR)	No/Million man-hours	3.61	3.71	4.18	2.38
	Employees	No/Million man-hours	3.98	4.16	5.07	2.93
	- Male	No/Million man-hours	4.40	4.47	4.77	2.81
	- Female	No/Million man-hours	2.49	2.93	6.30	3.45
	Contractors	No/Million man-hours	1.65	1.73	1.14	0.81
	- Male	No/Million man-hours	2.03	1.92	1.10	0.90
	- Female	No/Million man-hours	0	0.82	1.43	0
	Total Lost Time Injuries	Case	125	138	227	136
	Employees	Case	116	126	213	124
	- Male	Case	100	108	161	96
	- Female	Case	16	18	52	28
	Contractors	Case	9	12	14	12
	- Male	Case	9	11	12	12
	- Female	Case	0	1	2	0

GRI Standards	Unit	2560	2561	2562	2563
Occupational Illness Frequency Rate (OIFR)	No/Million man-hours	0.14	0	0.02	0.18
Employees	No/Million man-hours	0.03	0	0.02	0.24
- Male	No/Million man-hours	0.04	0	0.03	0.06
- Female	No/Million man-hours	0	0	0	0.98
Contractors	No/Million man-hours	0.73	0	0	0
- Male	No/Million man-hours	0.90	0	0	0
- Female	No/Million man-hours	0	0	0	0
Total number of occupational disease cases	Case	5	0	1	10
Employees	Case	1	0	1	10
- Male	Case	1	0	1	2
- Female	Case	0	0	0	8
Contractors	Case	4	0	0	0
- Male	Case	4	0	0	0
- Female	Case	0	0	0	0
Fatalities (all Employees and Contractors)	Person	0	0	1	0
Employees	Person	0	0	0	0
- Male	Person	0	0	0	0
- Female	Person	0	0	0	0
Contractors	Person	0	0	1	0
- Male	Person	0	0	1	0
- Female	Person	0	0	0	0
Lost Day Rate (LDR)	Days/Million man-hours	51	66	104	114
Employees	Days/Million man-hours	51	77	124	147
- Male	Days/Million man-hours	58	87	106	153
- Female	Days/Million man-hours	28	37	198	119
Contractors	Days/Million man-hours	47	17	34	22
- Male	Days/Million man-hours	57	17	37	24
- Female	Days/Million man-hours	0	17	19	0
Total number of lost days (only including lost scheduled work days)	Man Days	1,754	2,452	5,649	6,525
Employees	Man Days	1,499	2,336	5,225	6,205
- Male	Man Days	1,322	2,106	3,590	5,242
- Female	Man Days	177	230	1,635	963
Contractors	Man Days	255	116	424	320
- Male	Man Days	255	95	398	320
- Female	Man Days	-	21	26	0
Absentee Rate (AR)	%	2.05	2.01	1.99	1.90
Employees	%	2.37	2.40	2.38	2.39
- Male	%	2.37	2.34	2.02	2.08
- Female	%	2.38	2.65	3.87	3.70
Contractors	%	0.37	0.32	0.65	0.48
- Male	%	0.29	0.29	0.66	0.47
- Female	%	0.71	0.46	0.54	0.56
Absentee days	Days	88,825	93,668	135,091	135,547
Employees	Days	86,318	90,871	125,176	126,668
- Male	Days	67,179	70,527	85,194	89,085
- Female	Days	19,139	20,344	39,982	37,583
Contractors	Days	2,507	2,797	9,915	8,879
- Male	Days	1,609	2,098	8,966	7,891
- Female	Days	898	699	949	988
Near Miss	Case	959	1,870	3,015	1,977
Employees	Case	861	1,750	2,531	1,878
- Male	Case	726	1,611	2,357	1,704
- Female	Case	135	139	174	174
Contractors	Case	98	120	484	99
- Male	Case	90	118	474	91
- Female	Case	8	2	10	8
403-3 Workers with high incidence or high risk of diseases related to their occupation	Person	402	744	652	838
Employees	Person	307	703	584	693
- Male	Person	307	587	470	580
- Female	Person	0	116	114	113
Contractors	Person	95	41	68	145
- Male	Person	91	37	58	139
- Female	Person	4	4	10	6

## Water Withdrawal by Source

GRI Standards		Unit	2563
<b>Total water withdrawal by source</b>			
303-3	Total water withdrawal by source (with + without stress)	m <sup>3</sup>	82,504,769
	Surface water/rain water (with + without water stress)	m <sup>3</sup>	51,035,459
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	47,395,317
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	3,640,142
	Ground water (with + without water Stress)	m <sup>3</sup>	12,661,456
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	12,660,117
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	1,339
	Seawater (total) (with + without water stress)	m <sup>3</sup>	0
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	0
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	0
	Produced water (total) (with + without water stress)	m <sup>3</sup>	684,830
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	627,250
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	57,580
	Third-party water (with + without water stress)	m <sup>3</sup>	18,123,024
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	18,057,981
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	65,043
	<b>Total water withdrawal by source (with water stress)</b>	<b>m<sup>3</sup></b>	<b>34,673,306</b>
	Surface water/rain water (with water stress)	m <sup>3</sup>	19,608,256
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	19,608,256
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	0
	Ground water (with water stress)	m <sup>3</sup>	3,747,740
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	3,747,740
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	0
	Seawater (total) (with water stress)	m <sup>3</sup>	0
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	0
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	0
	Produced water (total) (with water stress)	m <sup>3</sup>	81,039
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	34,370
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	46,669
	Third-party water (with water stress)	m <sup>3</sup>	11,236,272
	Freshwater (≤1,000 mg/L Total Dissolved Solids )	m <sup>3</sup>	11,171,229
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	65,043
	<b>Total water withdrawal by source (without water stress)</b>	<b>m<sup>3</sup></b>	<b>47,831,463</b>
	Surface water (without water stress)	m <sup>3</sup>	31,427,203
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	27,787,062
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	3,640,142
	Ground water (without water stress)	m <sup>3</sup>	8,913,717
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	8,912,377
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	1,339
	Seawater (total) (without water stress)	m <sup>3</sup>	0
	Freshwater (≤1,000 mg/L Total Dissolved Solids )	m <sup>3</sup>	0
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	0
	Produced water (total) (without water stress)	m <sup>3</sup>	603,791
	Freshwater (≤1,000 mg/L Total Dissolved Solids )	m <sup>3</sup>	592,880
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	10,911
	Third-party water (without water stress)	m <sup>3</sup>	6,886,752
	Freshwater (≤1,000 mg/L Total Dissolved Solids )	m <sup>3</sup>	6,886,752
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	0

## Waste Water Discharge

GRI Standards		Unit	2563
<b>Waste water discharge</b>			
303-4	Total waste water discharge (with + without stress) (source wise)	m <sup>3</sup>	48,753,355
	Total surface water	m <sup>3</sup>	26,649,830
	Total ground water	m <sup>3</sup>	65,486
	Total sea water	m <sup>3</sup>	3,220,926
	Total third party water / municipality / common waste water treatment plant	m <sup>3</sup>	18,722,602
	Total third party water sent for used for other organization	m <sup>3</sup>	94,511
	Waste water Discharge (with water stress)	m <sup>3</sup>	25,906,869
	Surface water	m <sup>3</sup>	14,429,383
	Ground water	m <sup>3</sup>	47,719
	Sea water	m <sup>3</sup>	1,663,141
	Third party water / municipality / common waste water treatment plant	m <sup>3</sup>	9,763,971
	Third party water sent for used for other organization	m <sup>3</sup>	2,654
	Waste water discharge (without water stress)	m <sup>3</sup>	22,846,486
	Surface water	m <sup>3</sup>	12,220,446
	Ground water	m <sup>3</sup>	17,767
	Sea water	m <sup>3</sup>	1,557,785
	Third party water / municipality / common waste water treatment plant	m <sup>3</sup>	8,958,631
	Third party water sent for used for other organization	m <sup>3</sup>	91,857
	Total waste water discharge quality wise by fresh water and other water (with + without stress)	m <sup>3</sup>	48,753,355
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	39,684,310
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	9,069,045
	Waste water discharge with water stress	m <sup>3</sup>	25,906,869
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	24,694,216
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	1,212,652
	Waste water discharge without water stress	m <sup>3</sup>	22,846,487
	Freshwater (≤1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	14,990,094
	Other water (>1,000 mg/L Total Dissolved Solids)	m <sup>3</sup>	7,856,393

## Global Human Resources Data

GRI Standards		Unit	2560	2561	2562	2563
<b>Employees</b>						
405-1	Total employees by gender	Person	15,195	15,922	22,696	25,207
	- Male	Person	11,844	12,524	17,749	19,790
	- Female	Person	3,351	3,398	4,947	5,417
	Total Permanent employees	Person	14,525	15,221	22,027	23,134
	- Male	Person	11,299	11,944	17,225	18,158
	- Female	Person	3,226	3,277	4,802	4,976
	Total Temporary employees	Person	670	701	669	2,073
	- Male	Person	545	580	524	1,632
	- Female	Person	125	121	145	441
	Total employees by Level*	Person	14,525	15,221	22,027	23,134
	Executive Management	Person	94	101	109	115
	- Male	Person	83	88	95	100
	- Female	Person	11	13	14	15
	Senior Management	Person	388	414	577	606
	- Male	Person	301	320	468	492
	- Female	Person	87	94	109	114
	Middle Management	Person	1,485	1,619	2,341	2,458
	- Male	Person	1,185	1,281	1,820	1,911
	- Female	Person	300	338	521	547
	Junior Management	Person	6,106	5,831	8,495	8,922
	- Male	Person	4,246	3,521	5,097	5,353
	- Female	Person	1,860	2,310	3,398	3,569
	Non Management*	Person	6,452	7,256	10,505	11,033
	Male	Person	5,484	6,734	9,745	10,235
	Female	Person	968	522	760	798
	Total employees by Age*	Person	14,525	15,221	22,027	23,134
	Over 50 years old	Person	2,488	3,328	5,033	6,267
	- Male	Person	2,118	2,742	4,027	5,132
	- Female	Person	370	586	1,006	1,135
	30-50 years old	Person	8,542	9,024	13,199	13,265
	- Male	Person	6,412	6,896	10,191	10,194
	- Female	Person	2,130	2,128	3,008	3,071
	Below 30 years old	Person	3,495	2,869	3,795	3,602
	- Male	Person	2,769	2,306	3,007	2,832
	- Female	Person	726	563	788	770
<b>New employee hires*</b>						
401-1	Total new employees	Person	1,732	1,758	2,042	1,822
	- Male	Person	1,274	1,216	1,464	1,259
	- Female	Person	458	542	578	563
<b>Employee Turnover*</b>						
401-1	Total employee turnover	Person	1,556	1,363	2,093	1,964
	- Male	Person	1,203	1,021	1,502	1,413
	- Female	Person	353	342	591	551
	Total employee turnover rate	Turnover rate (%)	10.71	8.95	9.50	8.49
	Voluntary employees turnover	Person	1,039	1,137	1,695	1,461
	Voluntary employees turnover rate	Turnover rate (%)	7.15	7.47	7.70	6.32
	Number of employees laid off	Person	113	81	0	93
	Number of negotiations	Person	35	36	0	58
<b>Parental Leave*</b>						
401-3	Number of employees who took parental leave	Person	368	768	863	615
	- Male	Person	264	543	601	328
	- Female	Person	104	225	262	287
	Number of employees who returned to work after taking parental leave	Person	345	639	726	554
	- Male	Person	257	494	559	321
	- Female	Person	88	145	167	233
	Retention to work (after parental leave and still employed for the next 12 months)	Person	325	603	693	468
	- Male	Person	239	465	532	242
	- Female	Person	86	138	161	226

GRI Standards		Unit	2560	2561	2562	2563
<b>Employees training*</b>						
404-1	Total training hours provided to employee	Hours	329,779	463,175	728,206	429,886
	- Male	Hours	247,584	352,338	552,725	335,311
	- Female	Hours	82,195	110,837	175,481	94,575
	- Mandatory course	Hours	-	-	-	214,305
	- Non-mandatory course	Hours	-	-	-	215,582
	Total average training hours	Hours/Employee	22.70	30.43	33.06	18.58
	- Male	Hours/Employee	21.91	29.50	32.09	18.47
	- Female	Hours/Employee	25.48	33.82	36.54	19.01
	Total amount spent	USD	-	-	-	2,070,050
	- Mandatory course	USD	-	-	-	625,605
	- Non-mandatory course	USD	-	-	-	1,444,445
	- Region - Asia	USD	-	-	-	870,159
	- Region - EMEA	USD	-	-	-	757,347
	- Region - Americas	USD	-	-	-	442,544
<b>Performance Review*</b>						
404-3	Total employees receiving regular performance reviews	Person	14,525	15,221	22,027	15,648
	Total employees receiving career development reviews	Person	14,242	14,237	21,281	6,505
<b>Remuneration ratio of women to men</b>						
405-2	Strategic (base salary only)	Ratio	0.960	0.960	0.962	0.964
	Managerial (base salary only)	Ratio	0.944	0.945	0.947	0.949
	Managerial (base salary + other cash incentives)	Ratio	0.940	0.949	0.950	0.953
	Supervisory and Operational	Ratio	0.929	0.930	0.931	0.934
<b>Employee Engagement Score**</b>						
	Employee satisfaction score	%	73.60	74.91	74.91	73.89
	- Male	%	73.59	74.98	74.98	74.54
	- Female	%	79.80	80.84	80.84	77.40
	Data coverage of employee satisfaction survey	%	93.75	93.43	93.43	82.87
<b>Collective Bargaining</b>						
102-41	Total employees covered by collective bargaining agreements	Person	7,748	7,810	11,337	9,578
	Percentage of total employees covered by collective bargaining agreements	%	50.99	51.31	51.47	41.40
	Number of consultations/negotiations with trade unions over organizational changes [unit]	Number	94	334	262	103
<b>Human Rights Integration</b>						
412-2	"Total number of hours of employees training on human rights policies or procedures concerning aspects of human rights that are relevant to operations"	Hours	14,256	17,210	20,799	11,044
	"Total number of employees trained in human rights policies or procedures concerning aspects of human rights that are relevant to operations"	Person	11,403	12,819	19,362	9,366
	"Percentage of employees trained in human rights policies or procedures concerning aspects of human rights that are relevant to operations"	% of total employees	75.0	80.5	85.3	37.2
<b>Non-discrimination</b>						
406-1	Total number of incidents of discrimination and corrective actions taken	Case	4	0	0	8
	Number of incidents of discrimination and corrective actions taken regarding employees	Case	3	0	0	5
	Number of incidents of discrimination and corrective actions taken to all excluding employee	Case	1	0	0	3

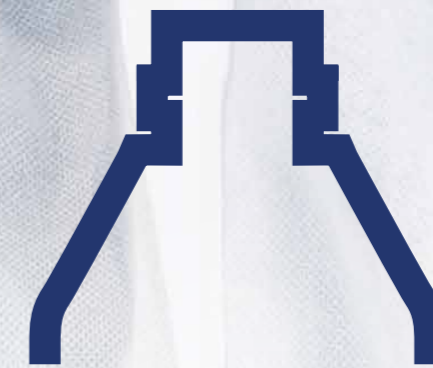
GRI Standards		Unit	2560	2561	2562	2563
<b>Rights of Indigenous People</b>						
411-1	Incidents of violations involving rights of indigenous people	Case	0	0	0	0
<b>Human Rights Assessment</b>						
412-1	Total number of operations	Number	83	91	108	123
	Total number of operations that have been subject to human rights reviews or impact assessments	Number	83	91	108	123
	Percentage of operations that have been subject to human rights reviews or impact assessments [unit]	%	100	100	100	100
<b>Human Rights Grievances</b>						
103-2	Total number of grievances concerning human rights through formal grievance process	Case	0	0	0	8
	Number of grievances about human rights (related to employees) through formal grievance process	Case	0	0	0	7
	Number of grievance about human rights (not related to employees) through formal grievance process	Case	0	0	0	0
	Total number of human rights grievances addressed in this reporting period	Case	0	0	0	8
	Number of human rights grievances (related to employees) addressed during the reporting period	Case	0	0	0	7
	Number of human rights grievances (not related to employees) addressed during the reporting period	Case	0	0	0	0
	Total number of human rights grievances filed in the previous reporting period that resolved during the reporting period	Case	0	0	0	0
	Number of human rights grievances (related to employees) filed in previous reporting period that were resolved during the reporting period	Case	0	0	0	1
	Number of human rights grievances (not related to employees) filed in previous reporting period resolved during the reporting period	Case	0	0	0	0
<b>Labor Practice Grievance</b>						
103-2	Total number of grievances about for labor practices filed through formal the grievance mechanism	Case	26	27	24	63
	Total number of grievances about labor practices addressed during the reporting period	Case	16	25	18	80
	Total number of grievances about labor practices resolved during the reporting period	Case	19	18	18	75
	Total number of grievances about labor practices filed prior to reporting period that were resolved during the reporting period	Case	15	21	22	43

\* Does not include temporary manpower. Temporary manpower is contingent manpower hired through an agency. Appropriate compliance training on Human Rights, Health & Safety has always been given to temporary manpower

\*\* 2017 - 2020 Restatement: Change to favourability score (Actively Engaged) is in line with best practices as it facilitates interpretability, targeted analysis leading to actionable insights and improvement actions

## Global CSR Data

GRI Standards	Unit	2560	2561	2562	2563
<b>Local Community Engagement</b>					
Percentage of operations with implemented local community engagement, impact assessments, and development programs	%	89	67	88	91
Total number of operations with any of the below local community engagement, impact assessments and developed programs (e.g. if site A has SIA and EIA, and site B has EIA the total number of sites with programs is 2)	Number	15	29	32	46
Number of operation with implemented social impact assessment including gender assessment	Number	11	10	9	14
Number of operation with implemented environmental impact assessment	Number	20	21	21	42
Number of operation with implemented public disclosure of results of environmental and social impact assessment	Number	13	12	13	27
Number of operation with implemented local community development programs	Number	17	18	18	25
Number of operation with implemented stakeholder engagement plans	Number	14	13	12	21
Number of operation with implemented broad base local community consultation committees and processes	Number	9	10	7	15
Number of operation with implemented work councils, occupational health and safety committees and other employee representation bodies to deal with impacts	Number	20	21	23	42
Number of operation with implemented formal local community grievance process	Number	12	3	7	18
<b>Social Grievances</b>					
Number of grievances regarding society received through formal grievance process	Number	1	1	1	1
Total number of societal grievances addressed during this reporting period	Number	0	0	0	1
Total number of societal grievances resolved during this reporting period	Number	0	0	0	1
Total number of societal grievances resolved in the previous reporting period	Number	4	2	1	0
<b>Total Philanthropic Activities</b>					
Total philanthropic activities	%	100	100	100	100
Charitable donations	USD	888,367	970,856	350,980	449,703
Community investments	USD	645,634	971,420	715,351	451,890
Commercial Initiatives in the community	USD	325,003	406,629	730,397	188,583
<b>Philanthropic Contributions</b>					
Total cash contributions	USD	1,749,830	1,771,435	1,796,730	1,090,176
Time: Estimate employee costs	USD	1,918,393	1,007,502	1,142,800	696,748
Time: Employee volunteering during paid working hours	Hour	103,681	58,640	60,960	33,607
Total in-kind giving	USD	93,160	122,914	153,140	250,528
Total management overheads	USD	16,012	454,556	82,360	73,118



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