

SUSTAINABILITY PERFORMANCE DATA

Sustainability
Report
2021



General Disclosures

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Group-level						
Revenue	USD billion	10	7	7	7.5	7.3
Global operations	no. of countries	13	13	13	13	13
Upstream						
Total landbank	ha	199,358	199,154	199,154	198,837	194,204
Sumatra	ha	67,035	66,915	66,915	66,598	65,834
Kalimantan	ha	132,323	132,239	132,239	132,239	128,371
Total planted area	ha	123,998	123,591	122,828	121,968	121,494
Sumatra	ha	56,282	56,584	56,610	55,912	56,544
Kalimantan	ha	67,716	67,007	66,218	66,056	64,950
Nucleus planted area	ha	118,121	117,679	117,032	117,344	116,875
Sumatra	ha	52,762	53,013	53,074	52,498	53,130
Kalimantan	ha	65,359	64,665	63,957	64,846	63,745
Scheme smallholder planted area	ha	5,877	5,912	5,796	4,624	4,620
Sumatra	ha	3,521	3,571	3,535	3,414	3,414
Kalimantan	ha	2,356	2,341	2,261	1,210	1,205
Total FFB produced by own plantations	MT	2,713,542	2,717,961	2,584,026	2,813,954	2,374,686
Nucleus	MT	2,578,755	2,594,064	2,475,555	2,703,918	2,272,841
Scheme smallholders	MT	134,787	123,897	108,471	110,036	101,845
Total mills	no.	18	17	17	16	16
Total FFB processed by Musim Mas mills	MT	3,725,397	3,556,709	3,437,968	3,815,493	3,341,946
Nucleus	MT	2,578,755	2,546,003	2,414,967	2,703,918	2,272,841
Scheme smallholders	MT	134,787	114,064	103,953	110,036	101,845
Third-party FFB suppliers	MT	1,011,855	896,642	919,048	1,001,539*	967,260
CPO produced	MT	843,293	796,581	774,892	860,295	754,568
PK produced	MT	214,126	202,829	195,859	220,853	191,371

* Restated due to rounding adjustment.

General Disclosures

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
FFB yield – own plantations	MT FFB/ha	23.55	23.71	22.79	25.85	22.74
FFB yield – scheme smallholders	MT FFB/ha	21.51	22.41	22.92	26.98	26.98
Extraction rate – CPO	%	22.64	22.40	22.54	22.60	22.58
Extraction rate – PK	%	5.75	5.70	5.70	5.79	5.73
CPO yield	MT CPO/ha	5.68	5.70*	5.53	6.25	5.54
Midstream and downstream						
CPO sourced by refineries	million MT	6.469	6.908	7.586	7.568	6.661

Certification

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Upstream						
RSPO certified – own plantation area	ha	146,924	136,588	136,588	135,824	135,710
RSPO certified – scheme smallholder area	ha	5,956	3,494	3,494	3,494	3,474
RSPO-certified mills	no.	15	13	12	12	10
CSPO produced, including scheme smallholder volumes	MT	727,662	697,401	695,151	671,883	628,566
CSPK produced, including scheme smallholder volumes	MT	182,458	175,555	176,645	169,334	157,095
ISPO-certified PTs	no.	11	5	5	4	4
ISCC certified mills	no.	18	12	12	12	11
Midstream and downstream						
CPO SG/IP	MT	375,058	300,711	293,439		
CPO MB	MT	518,347	686,473	284,143		
CPKO SG/IP	MT	47,880	27,603	13,103		
CPKO MB	MT	162,165	137,601	41,623		

* Restated due to rounding adjustment.

Employees

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Group-level						
Group total	no.	37,681	36,563	34,343	37,871	37,938
By country	Indonesia (no.)	35,864	34,634	32,522	36,156	36,495
	permanent (no.)	29,263				
	temporary (no.)	6,601				
	Malaysia (no.)	240	263	239	237	221
	Singapore(no.)	350	348	354	345	295
	Other countries (no.)	1,227	1,318	1,198	1,133	927
By gender	Male (no.)	29,542	26,965	25,327	29,754	30,207
	Female (no.)	8,139	9,598	9,016	8,117	7,731
New hires by employee category						
Senior management	no.	0				
Management	no.	24				
Staff	no.	845				
Worker	no.	10,516				
Turnover by employee category						
Senior management	%	4.37%				
Management	%	6.40%				
Staff	%	10.60%				
Worker	%	35.69%				
New hires by business segment						
Upstream	no.	6,542				
Midstream & downstream	no.	4,332				
Other	no.	289				

Employees

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Turnover by business segment						
Upstream	%	30.94%				
Midstream & downstream	%	34.85%				
Other	%	13.26%				
New hires by age group						
Under 30	no.	6,972				
30-50	no.	4,356				
Over 50	no.	57				
Turnover by age group						
Under 30	%	41.06%				
30-50	%	25.65%				
Over 50	%	14.09%				
New hires by gender						
Male	no.	8,876				
Female	no.	2,510				
Turnover by gender						
Male	%	30.32%				
Female	%	31.89%				
New hires by region						
Indonesia	no.	11,136				
Malaysia	no.	27				
Singapore	no.	52				
Other	no.	170				

Employees

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Turnover by region						
Indonesia	%	31.44%				
Malaysia	%	10.42%				
Singapore	%	13.94%				
Other	%	13.20%				
Average hours of training per year per employee						
Group level - male	total hours	240,811				
	average	8.15				
Group level - female	total hours	31,775				
	average	3.90				
Senior management - male	total hours	10				
	average	0.14				
Senior management - female	total hours	4				
	average	0.44				
Management - male	total hours	2,179				
	average	5.53				
Management - female	total hours	59				
	average	0.39				
Staff - male	total hours	52,300				
	average	10.96				
Staff - female	total hours	10,966				
	average	4.88				
Workers - male	total hours	186,323				
	average	7.67				
Workers - female	total hours	20,747				
	average	3.62				

Employees

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Upstream						
Total employees	no.	22,083	22,195	22,552	21,943	20,989
Total employees by gender	male (no.)	16,275	16,444	16,552	16,080	15,140
	female (no.)	5,808	5,751	6,000	5,863	5,849
Total senior management	no.	14	25	23	8	9
Senior management by gender - Sumatra	male (no.)	8	12	13	3	4
	female (no.)	0	0	0	0	0
Senior management by gender - Kalimantan	male (no.)	6	13	10	5	5
	female (no.)	0	0	0	0	0
Total management	no.	81	66	62	72	57
Management by gender - Sumatra	male (no.)	36	27	25	35	28
	female (no.)	2	2	2	1	0
Management by gender - Kalimantan	male (no.)	43	37	35	36	29
	female (no.)	0	0	0	0	0
Total staff	no.	1,179	1,229	990	961	978
Staff by gender - Sumatra	male (no.)	457	444	343	329	354
	female (no.)	137	130	109	101	120
Staff by gender - Kalimantan	male (no.)	450	508	397	409	383
	female (no.)	135	147	141	122	121
Total workers	no.	20,809	20,875	21,477	20,902	19,945
Workers by gender - Sumatra	male (no.)	7,160	7,219	7,371	7,222	6,966
	female (no.)	2,601	2,447	2,422	2,483	2,507
Workers by gender - Kalimantan	male (no.)	8,115	8,184	8,358	8,041	7,371
	female (no.)	2,933	3,025	3,326	3,156	3,101

Employees

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Wages						
Musim Mas lowest monthly wage (IDR)	Sumatra	2,484,041	2,484,041	2,289,228	2,119,100	1,949,285
	Kalimantan	2,700,000	2,625,900	2,458,000	2,377,000	2,095,000
Legal minimum monthly wage (IDR) ¹	Sumatra	2,484,041	2,484,041	2,289,228	2,119,100	1,949,285
	Kalimantan	2,700,000	2,625,000	2,458,000	2,377,000	2,095,000
Midstream and downstream						
Total employees	no.	13,089				
Total employees by gender	male (no.)	12,038				
	female (no.)	1,051				
Total senior management	no.	18				
Senior management by gender	male (no.)	16				
	female (no.)	2				
Total management	no.	171				
Management by gender	male (no.)	141				
	female (no.)	30				
Total staff	no.	3,967				
Staff by gender	male (no.)	3,120				
	female (no.)	847				
Total workers	no.	8,933				
Workers by gender	male (no.)	8,761				
	female (no.)	172				
Other (Global, including Indonesia)						
Total	no.	2,509				
	male (no.)	1,228				
	female (no.)	1,281				

¹ The wages listed are the lowest paid within each respective province. A full breakdown of all minimum wages in Indonesia by region is available [here](#).

Safety and Health

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Upstream						
Total accidents	no.	305	440	377	334	590
Total days lost to accidents	no.	3,100	9,169	11,001	14,528	14,874
Total working hours	hours	37,823,878	39,658,874	41,556,545 ²	37,982,621	35,313,204
Accident frequency rate (per 1,000,000 working hours) ³	-	8.06	11.09	9.07	8.79	16.71
Severity rate (average days lost per accident)	-	10.16	20.84	29.18	43.50	25.21
Fatalities	no.	3	7	3	1	4

Social and Community

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Support for smallholders						
Scheme smallholders (KKPA and VDP)						
Number of smallholders under KKPA programs	no.	4,044 [#]	3,571	3,571	2,423	2,423
Number of KKPA program	no. of units	9 [#]	9	9	7	7
KKPA area	ha	6,445	6,327	6,327	4,523	3,523
Trainings provided under KKPA program	no.	111	119	98	121	99
Villages under VDP program	no.	29 [#]	29	17	16	14
VDP area	ha	210	211	127	102	80
Total income of smallholders	IDR (million)	185,746.4	113,113.9	81,749.2	113,233.1	128,857.3
Total income of smallholders under KKPA	IDR (million)	183,133.7	111,630.1	80,949.3	112,174.3	127,934.7
Total income of villages under VDP	IDR (million)	2,612.7	1,483.8	799.9	1,058.9	922.6

² Restated.

³ Previously labelled 'Lost time accident rate (Frequency rate)'.

[#] EY has performed limited assurance procedures on these figures.

Social and Community

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Independent smallholders						
Training for smallholders ⁴	no.	35,632				
Training for Trainers: Smallholders Hubs	no.	1,049				
VEOs ⁵ trained under Smallholders Hubs	no.	177	44			
Infrastructure and services provided						
Musim Mas secondary schools	no.	3	2	2	1	1
Musim Mas primary schools	no.	9	9	9	9	8
Musim Mas kindergartens	no.	9	9	9	9	8
Total children living in plantations	no.	15,366	14,507	13,950	12,822	11,324
Clinics	no.	27	26	26	25	24
Aid posts	no.	2,602	2,401	2,285	2,043	1,897
Housing provided for employees	no.	13,805	14,439	13,486	12,919	12,383
Area enclaved for food security	ha	34.64	35.57	18.50	19.47	15.70
Infrastructure area	ha	8,326	7,873	7,621	7,320	7,170
CSR and community programs						
Contribution to CSR	IDR (billion)	21.3	22.4	15.2	11.6	12.2
Childcare centres	no.	48	49			

4 This includes smallholders previously trained under Musim Mas-IFC program and Extension Services Program.

5 Village Extension Officers (VEOs) were previously labelled 'Agricultural officers'.



Environment and Operations

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Upstream						
Total conservation area	ha	28,453	28,210	24,220	20,958	21,028
Total HCV area ⁶	ha	20,766	20,766	19,716	19,138	19,228
Total HCS area	ha	1,846	1,846	1,790	1,820	1,800
Other ⁷	ha	5,841	5,598	2,714		
Managed peat						
Planted area	ha	35,254	35,273	35,274	35,275	35,287
Conserved area	ha	4,253	4,253	4,051	4,049	3,536
Water usage (RSPO mills)						
Plantations	m ³ (million)	0.32	0.20*	0.57	0.65	1.14
Mill	m ³ (million)	3.54	3.55	3.60	3.97	3.26*
Mill water usage intensity	m ³ /MT FFB processed	1.13 [#]	1.17	1.23	1.23	1.19
Water footprint (Water Footprint Network methodology)						
Blue water	m ³ (million)	6.29	9.71	8.71	9.85	7.92
Green water	m ³ (million)	1,533.79	1,577.42	1,567.55	1,554.19	1,548.17
Grey water	m ³ (million)	354.70	385.77	477.68	387.78	342.38
Effluent discharged						
BOD levels river discharge – Sumatra	mg/l	61.08 [#]	52.07	67.57	54.66	66.27
BOD levels river discharge – Kalimantan	mg/l	29.05 [#]	23.37	37.24	26.28	
BOD levels land application – Sumatra	mg/l	45.42 [#]	47.08	58.85	49.12	47.51
BOD levels land application – Kalimantan	mg/l	34.13 [#]	31.99	46.55	29.28	35.88
COD levels river discharge – Sumatra	mg/l	170.24 [#]	151.65	204.96	149.81	183.37
COD levels river discharge – Kalimantan	mg/l	139.13 [#]	115.76	172.89	159.33	

⁶ Overlaps in HCV and HCS areas are reflected as HCV figures.

⁷ 'Other' includes steep area, wildlife corridors, and riparian buffer zones not identified in HCV and HCSA assessments.

* Restated due to rounding adjustment.

[#] EY has performed limited assurance procedures on these figures.

Environment and Operations

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
COD levels land application – Sumatra	mg/l	152.83 [#]	144.71	203.82	140.48	142.31
COD levels land application – Kalimantan	mg/l	156.67 [#]	148.61	216.72	136.21	172.57
Total volume of treated effluent discharged into rivers – Sumatra	m³	133,034	206,604	109,303	74,389	128,951
Total volume of treated effluent discharged into rivers – Kalimantan	m³	174,252	134,761	88,256	12,512	
Total volume of treated effluent applied to land – Sumatra	m³	995,630	1,030,358	1,021,719	993,994	789,785
Total volume of treated effluent applied to land – Kalimantan	m³	1,108,050	1,183,013	998,416	1,058,915	770,952
Phosphorus and nitrogen in water courses						
P-level inlet – Sumatra	mg/l	0.08	0.67	0.47	0.88	0.18
P-level outlet – Sumatra	mg/l	0.09	1.05	1.07	0.26	0.17
P-level inlet – Kalimantan	mg/l	0.06	0.02	0.08	0.06	0.06
P-level outlet – Kalimantan	mg/l	0.06	0.01	0.08	0.04	0.06
N-level inlet – Sumatra	mg/l	4.95	2.71	1.70	2.97	1.02
N-level outlet – Sumatra	mg/l	5.22	2.86	1.94	1.23	0.93
N-level inlet – Kalimantan	mg/l	2.01	2.22	2.63	2.46	0.81
N-level outlet – Kalimantan	mg/l	2.36	2.06	2.24	1.85	0.57
Fertilizer type and usage						
Inorganic fertilizer	MT	148,121	154,697	142,407	140,569	140,571
Inorganic fertilizer usage (mature) – Sumatra	MT/ha	1.54	1.63	1.73	1.87	1.77
Inorganic fertilizer usage (mature) – Kalimantan	MT/ha	2.28	2.08	1.95	1.62	1.78
Inorganic fertilizer usage (immature) – Sumatra	MT/ha	2.83	2.64	2.78	2.90	3.36
Inorganic fertilizer usage (immature) – Kalimantan	MT/ha	1.40	1.54	1.77	1.52	1.33

EY has performed limited assurance procedures on these figures.

Environment and Operations

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Total organic fertilizer: EFB	MT	20,319	19,561			
Total organic fertilizer: POME	m ³ (million)	2.10	2.21	2.02	2.04	1.59
Total organic fertilizer: DDS	MT	45,956	64,633	69,770	66,673	70,001
Total organic fertilizer: boiler ash	MT	25,123				
Herbicide usage						
Toxicity per hectare planted – Sumatra	toxicity/ha	632	580*	552	519	484
Toxicity per hectare planted – Kalimantan	toxicity/ha	417	490*	412	326	430
Energy consumption from renewable sources						
Palm kernel shells (PKS)	MT	44,913	31,240	39,639	48,416	42,927
PKS – energy	GJ	677,289	471,103	597,750	730,113	647,335
Palm fibre	MT	885,565	721,617	705,370 ⁸	779,957	645,933
Palm fibre – energy	GJ (million)	6.08	4.72	4.68	6.00	5.00
GHG emissions⁹ (PalmGHG)						
Total net GHG emissions (RSPO mills)	MT CO ₂ e	2,583,098	2,595,344	2,479,582	2,745,453	2,278,580
GHG emission intensity (RSPO mills) – Group	MT CO ₂ e/MT CPO	2.87 [#]	3.17	2.80	3.49	3.39
GHG emission intensity (RSPO mills) – Sumatra	MT CO ₂ e/MT CPO	4.87	4.97	4.34	5.04	4.64
GHG emission intensity (RSPO mills) – Kalimantan	MT CO ₂ e/MT CPO	1.12	1.25	1.12	1.42	1.62
Methane capture facilities	no.	16 [#]	15	15	14	13
Total emissions avoided by methane capture facilities	MT CO₂e	575,075	544,220	537,965	593,070	484,953
Surplus electricity generated from methane exported to national grid	kWh	33,900,657	31,987,614			

⁸ Restated.

⁹ Other than the number of methane capture facilities, data reflects previous auditing cycle.

* Restated due to rounding adjustment.

EY has performed limited assurance procedures on these figures.

Environment and Operations

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Fire incidents						
Hotspots within concessions	no.	87	151	119	69	35
Fires within concessions	no.	9	11	16	18	4
Hotspots surrounding concession area	no.	326	289	1,689	269	130
Fires surrounding concession area	no.	90	71	997	109	33
Fire trainings conducted	no.	161	144	148	157	138
Free Fire Village Program (FFVP) villages	no.	74	75	75 ¹⁰	73	71
FFVP village area	ha	450,769	468,569	458,361	466,117	431,092

Supply Chain

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Upstream						
Sourcing						
FFB volumes processed by own mills	Own plantations (MT)	2,578,755	2,546,003	2,414,967	2,703,918	2,272,841
	Scheme smallholders (MT)	134,787	114,064	103,953	110,036	101,845
	3 rd party FFB suppliers and independent smallholders via traders (MT)	1,011,853	896,642	918,385	1,001,538	967,260
	Independent smallholders - direct (MT)	2	0	663	0	0

¹⁰ Restated.

Supply Chain

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Own mills that source from own plantations only	no.	10	10	10	9	9
Own mills that also source 3 rd party FFB	no.	8	7	7	7	7
3 rd party FFB suppliers	3 rd party plantations (no.)	2	0			
	Independent smallholders via traders (no.)	14,457	11,401			
Midstream						
Sourcing						
CPO supplier mills (excluding own mills)	no.	535	558	582		
CPO supply volume by source	Own mills (%)	13.1	15.3	10.6	11.0	11.5
	Supplier mills (%)	85.6	83.9	88.7	89.0	88.3
	Intermediary (%) traders	1.3	0.8	0.7	0.0	0.2
CPO supply volume by country	Indonesia (%)	94.4	92.4	93.5		
	Malaysia (%)	5.5	6.6	6.1		
	Other (%)	0.1	1.0	0.4		
Supplier mills that source FFB from own plantations only	no.	84				
Supplier mills that also source 3 rd party FFB	no.	451				
Traceability						
Traceability to mill	%	100	100	100	100	100
Overall traceability to plantation (TTP)	%	94	83	60	56	53
TTP for supplier mills	%	93	80	58		

Supply Chain

Category / Indicator	Measurement unit / breakdown	FY2021	FY2020	FY2019	FY2018	FY2017
Supplier engagement						
Supplier mills that have attended NDPE workshops	%	94	76	51		
Supplier mills that have submitted NDPE commitments	%	93 [#]	97	80		
Suppliers that have completed Self-Assessment Tools (SAT)	%	77 [#]	60	24		
Certification						
Supplier mills RSPO certified	%	27.6	30.7	27.0		
Supplier groups RSPO certified	%	10.7	11.8	12.0		
Supplier mills ISPO certified	%	35.8	52.6	43.0		
Supplier groups ISPO certified	%	27.0	47.1	37.0		
Supplier mills MSPO certified	%	26.4				
Supplier groups MSPO certified	%	23.6				
Supplier mills ISCC certified	%	13.0	16.5	10.0		
Supplier groups ISCC certified	%	6.8	7.9	9.0		
Cumulative grievances raised and closed						
Third party suppliers (cumulative since FY2019)						
Raised	no.	59				
Closed	no.	36				
Active	no.	23				
Musim Mas own operations (cumulative since FY2019)						
Raised	no.	5				
Closed	no.	1				
Active	no.	4				

EY has performed limited assurance procedures on these figures.

IUCN Red List of Threatened Species Identified at Musim Mas Regions of Operations

(As of December 2021)

IUCN status	Common name (Indonesian)	Scientific name	Common name (English)	Type
Critically endangered	Cucak Rawa	<i>Pycnonotus zeylanicus</i>	Straw-headed Bulbul	Bird
	Biuku/Tuntong Sungai	<i>Batagur affinis</i>	Southern River Terrapin	Amphibian
	Kura-kura Sungai Kalimantan	<i>Orlitia borneensis</i>	Malayan Giant Turtle	Amphibian
Endangered	Bangau Bluwok	<i>Mycteria cinerea</i>	Milky stork	Bird
	Bangau Storm	<i>Ciconia stormi</i>	Storm's Stork	Bird
	Caladi Batu	<i>Meiglyptes tristis</i>	White-rumped Woodpecker	Bird
	Cica Daun Besar	<i>Chloropsis sonnerati</i>	Greater Green Leafbird	Bird
	Cica Daun Sayap Biru	<i>Chloropsis cochinchinensis</i>	Javan Leafbird	Bird
	Empuloh Janggut	<i>Alophoixus bres</i>	Grey-cheeked Bulbul	Bird
	Julang Jambul Hitam	<i>Rhabdotorrhinus corrugatus</i>	Wrinkled Hornbill	Bird
	Bekantan	<i>Nasalis larvatus</i>	Proboscis Monkey	Mammal
	Kukang Sunda	<i>Nycticebus coucang</i>	The Sunda Slow Loris / Greater Slow Loris	Mammal
	Monyet Kacamata	<i>Trachypithecus obscurus</i>	Dusky Leaf Monkey / Dusky Langur	Mammal
	Owa Kalimantan	<i>Hylobates albibarbis</i>	Bornean Agile Gibbon / Bornean White-bearded Gibbon	Mammal
	Owa Ungko	<i>Hylobates agilis</i>	Agile Gibbon	Mammal
	Siamang	<i>Hylobates syndactylus / Symphalangus syndactylus</i>	Siamang	Mammal
	Tapir Asia	<i>Tapirus indicus</i>	Malay Tapir	Mammal
	Kura-kura Batok	<i>Cuora amboinensis</i>	Southeast Asian Box Turtle	Amphibian
	Kura-kura Duri	<i>Heosemys spinosa</i>	Spiny Turtle	Amphibian
Kura-kura pipi putih	<i>Siebenrockiella crassicollis</i>	Black Marsh Turtle	Amphibian	

IUCN Red List of Threatened Species Identified at Musim Mas Regions of Operations

(As of December 2021)

IUCN status	Common name (Indonesian)	Scientific name	Common name (English)	Type
Vulnerable	Bangau Tongtong	<i>Leptoptilos javanicus</i>	Lesser Adjutant	Bird
	Betet Ekor Panjang	<i>Psittacula longicauda</i> / <i>Belocercus longicaudus</i>	Long-tailed Parakeet	Bird
	Elang Wallace	<i>Spizaetus nanus</i> / <i>Nisaetus nanus</i>	Wallace's Hawk Eagle	Bird
	Julang emas	<i>Aceros undulatus</i> / <i>Rhyticeros undulatus</i>	Wreathed Hornbill	Bird
	Kangkareng Hitam	<i>Anthracoceros malayanus</i>	Black Hornbill	Bird
	Kerak Kerbau	<i>Acridotheres javanicus</i>	Javan Myna	Bird
	Kuau Raja	<i>Argusianus argus</i>	Great Argus	Bird
	Punai Besar	<i>Treron capellei</i>	Large Green-pigeon	Bird
	Puyuh Hitam	<i>Melanoperdix niger</i>	Black Partridge	Bird
	Rangkong Badak	<i>Buceros rhinoceros</i>	Rhinoceros Hornbill	Bird
	Rangkong Papan	<i>Buceros bicornis</i>	Great Hornbill	Bird
	Sempidan Biru	<i>Lophura ignita</i>	Crested Fireback	Bird
	Babi Berjenggot	<i>Sus barbatus</i>	The Bornean Bearded Pig	Mammal
	Berang-Berang Cakar Kecil	<i>Aonyx cinereus</i>	Asian small-Clawed otter	Mammal
	Beruang madu	<i>Helarctos malayanus</i>	Sun Bear	Mammal
	Beruk	<i>Macaca nemestrina</i>	Pig Tailed Macaque / Southern Pig-tailed Macaque	Mammal
	Kedih	<i>Presbytis thomasi</i>	Thomas's Langur	Mammal
	Lutung Kelabu	<i>Trachypithecus cristatus</i>	Silvery Lutung	Mammal
	Lutung Merah	<i>Presbytis rubicunda</i>	Maroon Langur / Red Langur	Mammal
	Monyet Ekor Panjang	<i>Macaca fascicularis</i>	Long-tailed Macaque / Common Long-tailed Macaque	Mammal
Rusa Sambar	<i>Cervus unicolor</i> / <i>Rusa unicolor</i>	Sambar Deer	Mammal	

IUCN Red List of Threatened Species Identified at Musim Mas Regions of Operations

(As of December 2021)

IUCN status	Scientific name	Common name (Indonesian)	Common name (English)	Type
Vulnerable	Tarsius bangka	<i>Tarsius bancanus</i>	Bornean Tarsier	Mammal
	Senyulong / Buaya Sepit	<i>Tomistoma schlegelii</i>	False Gharial	Reptile
	Ular Kobra/Ular Anang	<i>Ophiophagus hannah</i>	King Cobra	Reptile
	Bulus	<i>Amyda cartilaginea</i>	Asiatic Softshell Turtle	Amphibian
	Kura-Kura Tempurung Lunak	<i>Pelodiscus sinensis</i>	Chinese Softshell Turtle	Amphibian
Near threatened	Asi besar	<i>Malacopteron magnum</i>	Rufous-crowned Babbler	Bird
	Asi Topi Jelaga	<i>Malacopteron affine</i>	Sooty-capped Babbler	Bird
	Bangau Hitam	<i>Ciconia episcopus</i>	Asian Woollyneck	Bird
	Berencet Besar	<i>Napothera macrodactyla / Turdinus macrodactylus</i>	Large Wren-babbler	Bird
	Betet Biasa	<i>Psittacula alexandri</i>	Red-breasted Parakeet	Bird
	Cabai Tunggir Coklat	<i>Dicaeum everetti</i>	Brown-backed Flowerpecker	Bird
	Caladi Badok	<i>Meiglyptes tukki</i>	Buff-necked Woodpecker	Bird
	Cekakak Hutan Melayu	<i>Actenoides concretus</i>	Rufous-collared Kingfisher	Bird
	Cica Daun Kecil	<i>Chloropsis cyanopogon</i>	Lesser Green Leafbird	Bird
	Cipoh Jantung	<i>Aegithina viridissima</i>	Green Iora	Bird
	Ciung Air Pong Pong	<i>Macronus ptilosus</i>	Fluffy-backed Tit-babbler	Bird
	Cucak Gunung	<i>Pycnonotus bimaculatus</i>	Orange-spotted Bulbul	Bird
	Cucak Kelabu	<i>Pycnonotus cyaniventris / Ixidia cyaniventris</i>	Grey-bellied Bulbul	Bird
	Cucak Rumbai Tungging	<i>Pycnonotus eutilotus / Euptilotus eutilotus</i>	Puff-backed Bulbul	Bird
	Elang Ikan Kecil	<i>Ichthyophaga humilis</i>	Lesser Fish-eagle	Bird
	Elang Ikan Kepala Kelabu	<i>Ichthyophaga ichthyaetus</i>	Grey-headed Fish-eagle	Bird
Enggang Kihingan	<i>Anorrhinus galeritus</i>	Bushy-crested Hornbill	Bird	

IUCN Red List of Threatened Species Identified at Musim Mas Regions of Operations

(As of December 2021)

IUCN status	Scientific name	Common name (Indonesian)	Common name (English)	Type
Near threatened	Kadalan Beruang	<i>Phaenicophaeus diardi</i>	Black-bellied Malkoha	Bird
	Kucica Ekor Kuning	<i>Trichixos pyrropygus</i>	Rufous-tailed Shama	Bird
	Luntur Diard	<i>Harpactes diardii</i>	Diard's Trogon	Bird
	Luntur Kasumba	<i>Harpactes kasumba</i>	Red-naped Trogon	Bird
	Madi Hijau Kecil	<i>Calyptomena viridis</i>	Green Broadbill	Bird
	Madu Leher Merah	<i>Anthreptes rhodolaemus</i>	Red-throated Sunbird	Bird
	Nuri Tanau	<i>Psittinus cyanurus</i>	Blue-rumped Parrot	Bird
	Pelanduk Dada Putih	<i>Trichastoma rostratum / Pellorneum rostratum</i>	White-chested Babbler	Bird
	Pelatuk Kumis Kelabu	<i>Chrysophlegma humii</i>	Chequer-throated Yellownape	Bird
	Pentis Kumbang	<i>Prionochilus thoracicus</i>	Scarlet-breasted Flowerpecker	Bird
	Perenjak Sayap Garis / Perenjak Jawa	<i>Prinia familiaris</i>	Bar-winged Prinia	Bird
	Pergam Hijau	<i>Ducula aenea</i>	Green Imperial Pigeon	Bird
	Poksai Mantel	<i>Garrulax palliatus</i>	Sunda Laughingtrush	Bird
	Punai Bakau	<i>Treron fulvicollis</i>	Cinnamon-headed Green-pigeon	Bird
	Sempur Hujan Darat	<i>Eurylaimus ochromalus</i>	Black-and-yellow Broadbill	Bird
	Sepah Tulin	<i>Pericrocotus igneus</i>	Fiery Minivet	Bird
	Sikatan Melayu	<i>Cyornis turcosus</i>	Malay Blue-flycatcher	Bird
	Sikatan Rimba Dada Kelabu	<i>Cyornis umbratilis</i>	Grey-chested Jungle-flycatcher	Bird
	Takur Ampis Sumatra	<i>Caloramphus hayii</i>	Malay Brown Barbet	Bird
	Takur Tutut	<i>Megalaima rafflesii / Psilopogon rafflesii</i>	Red-crowned Barbet	Bird
Takur Warna-warni	<i>Megalaima mystacophanos / Psilopogon mystacophanos</i>	Red-throated Barbet	Bird	

IUCN Red List of Threatened Species Identified at Musim Mas Regions of Operations

(As of December 2021)

IUCN status	Scientific name	Common name (Indonesian)	Common name (English)	Type
Near threatened	Tangkar Ongklet	<i>Platylophus galericulatus</i>	Crested Jay	Bird
	Tepus Tunggir Merah	<i>Stachyris maculata</i>	Chestnut-rumped Babbler	Bird
	Tiong Batu Kalimantan	<i>Pityriasis gymnocephala</i>	Bornean Bristlehead	Bird
	Jelarang bilalang	<i>Ratufa affinis</i>	Pale Giant Squirrel	Mammal
	Kalong Besar	<i>Pteropus vampyrus</i>	Large Flying-fox	Mammal
	Musang Belang	<i>Hemigalus derbyanus</i>	Banded Civet	Mammal
	Kura-kura Bergerigi	<i>Cyclemys dentata</i>	Asian Leaf Turtle	Amphibian