SHIN YANG SDN. BHD.

PUBLIC SUMMARY

FOR

Linau Forest Management Unit (T-3228)

Version: 31st May, 2025

Name of Forest Management Unit :
Linau Forest Management Unit (T-3228)

License Holder:
Shin Yang Trading Sdn Bhd
Harvest Contractor & Forest Management :
Shin Yang Sdn BHd

Geographical Location:
Belaga , Kapit Division

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1. SHIN YANG SDN BHD FORESTRY POLICY STATEMENT

SHIN YANG SDN BHD
Forestry Policy Statement

Revised Date: 21st February, 2021

Shin Yang Sdn. Bhd. is the harvesting contractor in managing the natural forest and harvesting activities at the Forest Management Units (FMUs) of Shin Yang Group (Logging Division).This policy of commitment defines the company process of managing forest to maintain and enhance the economic, social and environmental values of the forests in our FMUs for the benefit of present & future generations. This policy will be a guideline for all levels of our local stakeholders (employees, local community & contractor) in carrying out the company business in a conscience manner.

It is our commitment to:

1. Ensure compliance to the laws and regulations associated with our forestry operations that will be verified by an independent organization to meet the Sarawak Timber Legality Verification System (STLVS) Principle 1-4 and Malaysian Criteria & Indicators for sustainable forest management (MC&I SFM).

2. Operate according to Forest Management Plan and fulfills all general, terms & conditions stated in the approved Environmental Impact Assessment Agreement.

3. Strive to protect the values inherent to our natural forests that include water resources and quality, soil protection, habitat and wildlife through buffering streams, protecting steep slopes and controlling the encroachment, illegal harvesting, hunting and other unauthorized activities by our staff.

4. Ensure the timber harvesting is adhering to reduced impact logging practice.

5. Maintain and enhance the attributes of High Conservation Value (HCV) within our FMUs forest.

6. Respect customary rights of indigenous people that are associated with our forest concessions and respect their use rights and activities in areas through Free, Prior and Informed Consent (FPIC) process.

7. Ensure sustainable management of our forest operations to preserve the long-term viability of forest resources and raw material supply for production of wood products through the continual assessment, analysis, evaluation, monitoring and reviewing e.g. internal audit and management review.

8. Enhance the skills, knowledge, awareness and competency of employee and local communities through relevant trainings and consultation.

9. Provide a safe working environmental by adhering to occupational safety and health policy and ensure that all employees and their families within the FMUs observe current legislation or regulation.

10. Embark on a journey to certify our forest management units to meet internationally recognized standards as part of our commitment to be in line with Sarawak Forest Policy 2019.

"Step by Step to Excellence"

ANDY WONG KO HOCK
EXECUTIVE DIRECTOR

JAMES LING LU KIONG
GROUP MANAGING DIRECTOR

Public Summary for Linau FMU T-3228

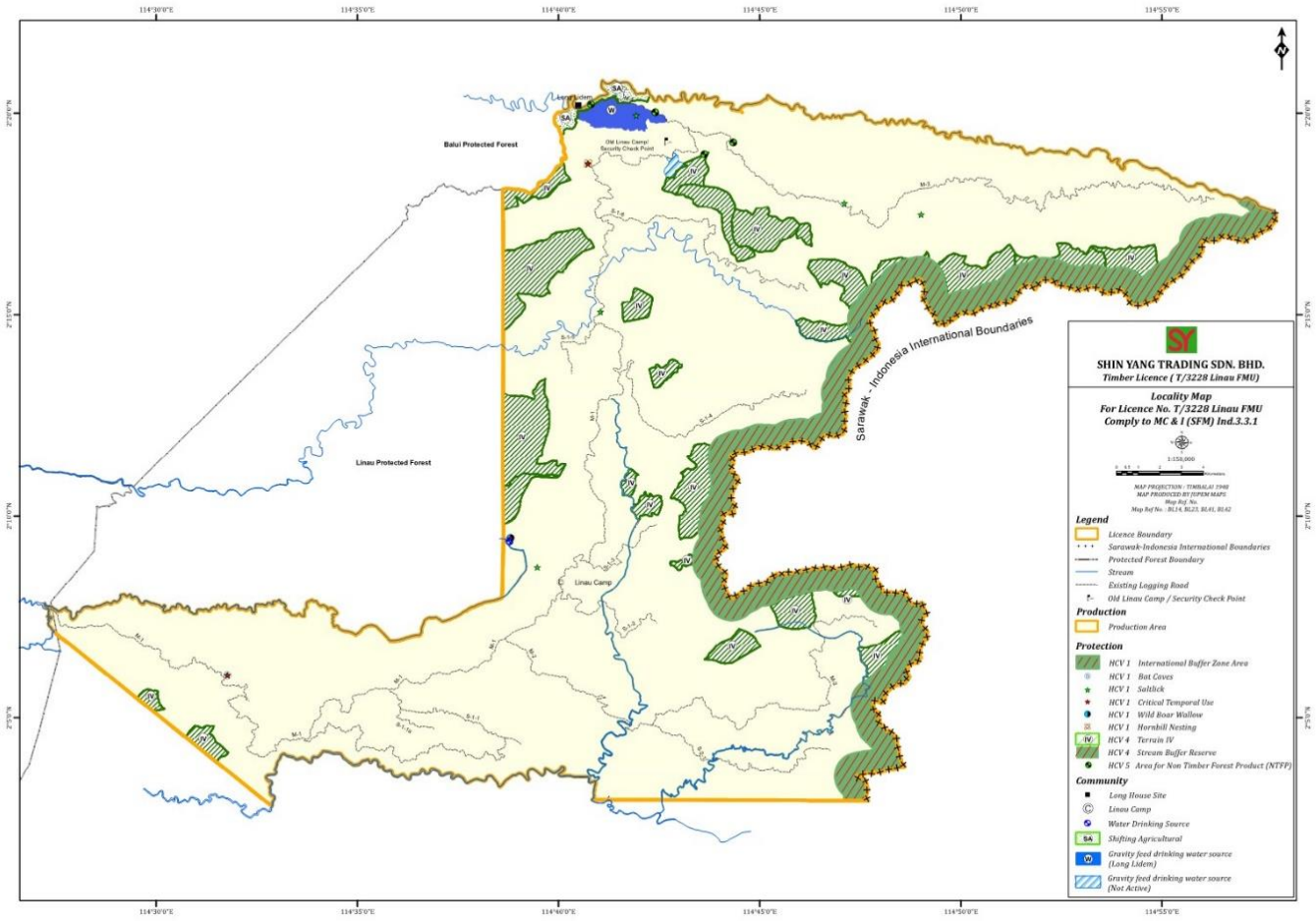


Figure 1: Location of Linau FMU T-3228

1. Locality

The Linau Forest Management Unit (FMU) T-3228 covers an area of **72,710Ha(s),** its operable area is **59,151 ha(s)** and the remaining **13,559 ha(s)** is protection area. It was classified as Permanent Forest (PF) under Linau PF and Balui PF, & adjacent to Bahau PF at coupe 1. Linau FMU area is divided into 25 coupes with sizes ranging from 1,234 ha to 5,933 ha. **95% of the FMU area is located within the HoBs.** The license T3228 was initially managed by Jebadi Sdn Bhd and was transferred to Diamond League S/B on 13 JUNE 2003. It was granted a forest logging re-entry/ harvesting license and managed by Shin Yang Trading Sdn Bhd. Commencing from year 2003 to 29 APRIL 2020 and Shin Yang Sdn Bhd is the harvesting contractor. The Linau FMU T3228 is located at Linau about 200 km east of Kapit town and 120 km South East of Belaga Town.

2. Background

(a) Topography

6,216 ha(s) of steep slopes areas (Terrain Classes IV) are found within some coupes of FMU area as well as along the areas bordering Sarawak-Indonesia Border.The site has elevations ranging from 2,000ft to over 5,000ft above mean sea level (amsl).

(b) **Geology and soils:** Skeletal soils and Red-yellow Podzolic soils., Gley soils, Podzols & Skeletal soil**.**

(c) **Natural forest types :** Mixed-Dipterocarp forest (MDF) & Secondary Mixed Dipterocarp Forest

(d) **Precipitation :** Based on data recorded at Belaga Weather Forecast, the mean annual rainfall of the FMU is about 3,595 mm.

(e) Local Community Settlement : there is no any settlement found inside the FMU area, but there is a longhouse, namely Long Lidam, found adjacent the boundary of the license area. The ethnicity of Long Lidem villagers are Punan Busang , with population around 110 villagers.

3. Forest Resources

The timber stocks proportionate of DBH classes for Linau FMU are 30-40 cm dbh = 28%, 40-60cm dbh = 43%, 60-80 cm dbh is16%, 80-120 cm dbh is 11% and 120 cm and above dbh is 2%. **Non- Timber Growing Stock** is small- sized rattan species locally known as *Uwei mongo* and *Uwei selongo* in the forest to produce baskets, hats, backpack and mats & Firewood ranks, Kayu Belavan (*Tristaniopsis sp.*) and Kayu Tekalit (*Lithocarpus sp.)* .**Protected Timber Growing Stock** (HCV Assessment,Y-2016) Totally protected (TP) is only Ensurai ; Protected (P) such as -Menggris, Ipoh, Entimau , Kara, & Lengkan Gaharu and Vulnerable (VU): - Lun runcing, Selangan Merah & Gaharu. **Endemic Flora Species :** Kerdam Bukit, Luis , Urat Mata, Lun Runcing, Meranti Binatoh, Selangan Merah, Meranti Pasir, Resak Tangai Ungu, Empili, Putat , Segera, Pingan, Kakang, Kumpang, Ubah, Selunsur, Kawi, Nyalin, Rambutan Putih & Bayur (Some endemic species may be commercially harvested in accordance to the state regulation).

4. Forest Zoning & Land Use Cover

Total Area : 72,710 ha(s)

Production Area : **59,151 ha(s)- 81%** Operable area & PSP area (included PSP)

Protection Area : 12,887 ha(s) – 18%, riparian buffer zone , IBBZ , Terrain IV as approved and HCVF areas, and

Community Use Area : 672 ha(s) -1% respected as SA area & Supply water for community of Long Lidem.

5. Management Objectives:

Ensure management effective with gaining the balance among economic viable , social acceptance and environment feeling according to applicable legal framework.

6. Cutting rule & Cutting Limit :

The diameter-limit cutting are ≥ DBH 50 dbh for Dipterocarp species and ≥ 45cm dbh for non-Dipterocarp species & ensure that all species listed as Totally Protected under the Wild Life Protection Ordinance 1998 would not be felled.

7. Yield Regulation :

The area will be worked over a period of 25 years in one cutting cycle according to Policy Direction in Forest Management Certification in Sarawak.

8. Timber Stock Growth (Simulation as at July 2024) :

23 PSPs have been monitored and updated.

Volumes/ ha for initial forest stock 30 cm dbh and above = 111 m^3/ha

Volumes/ ha for potential yield limited by regulated cutting limit = 58 m^3/ha

Basal average = 11.97 m^2 /ha

Percentage for forest stock classify as ;

DBH 30- 40 cm = 59%; 40-59 cm = 34% ; 60- 79 =5% ; 80-119 = 2% ; 120 & above = 1%

For the Yields 30 cm dbh and above , growth (m3 ha-1) per annum = 7.27

For the Yields 45 cm dbh and above , growth (m3 ha-1) per annum = 1.90

For the Yields 50 cm dbh and above , growth (m3 ha-1) per annum = 1.26

(a) Monitoring of Forest Growth & Biomass

PSP growth is monitored for Year 2025.

Spp	Vernacular Name	Avg, No Tree per/ plot	Average DBH/ cm			Average Vol/ m3		
			Interval = 4.13 year			Interval = 4.13 year		
			Ass.1	Ass.2	Growth	Ass.1	Ass.2	Growth
Luis	*Hopea*	**1.00**	46.50	50.80	**1.04**	1.67	2.04	0.090
Meranti	*Shorea*	**2.00**	35.55	38.40	**0.69**	0.91	1.08	0.042
Urat Mata	*Parashorea*	**1.00**	65.40	69.00	**0.87**	3.64	4.11	0.114
Medang	*Beilschmiedia, Cryptocarya, Litsea*	**10.00**	40.11	44.25	**1.00**	1.19	1.49	0.073
Empili	*Lithocarpus, Quercus*	**6.00**	37.17	40.67	**0.85**	1.00	1.23	0.055
Benuah	*Macaranga*	**7.00**	42.61	44.34	**0.42**	1.37	1.50	0.031
Ubah	*Syzygium*	**5.00**	42.50	42.70	**0.05**	1.36	1.38	0.004
Ara Lengkan	*ficus*	**4.00**	35.08	37.23	**0.52**	0.88	1.01	0.031

Spp	Vernacular Name	Avg, No Tree per/ plot	Average DBH/ cm			Average Vol/ m3		
			Interval = 4.13 year			Interval = 4.13 year		
			Ass.1	Ass.2	Growth	Ass.1	Ass.2	Growth
Akau	*Xylopia*	**3.00**	44.13	47.40	**0.79**	1.48	1.75	0.064
Other		**28.00**	38.81	41.37	**0.62**	1.11	1.28	0.042
Total number of trees:		**67.00**	**42.79**	**45.62**	**0.69**	**1.46**	**1.69**	**0.051**

Mortality

Spp	Vernacular Name	Avg, No Mortality tree per/ plot	Average DBH/ cm			Average Vol/ m3		
			Interval = 4.13 year			Interval = 4.13 year		
			Ass.1	Ass.2	Mortal /y	Ass.1	Ass.2	Mortal /y
Meranti	*Shorea*	**1.00**		30.80			0.65	0.158
Benuah	*Macaranga*	**5.00**		37.68	-	-	1.04	1.253
Ubah	*Syzygium*	**1.00**		40.00	-	-	1.19	0.287
Akau	*Xylopia*	**2.00**		40.55	-	-	1.22	0.593
Other	*Non Dip*	**4.00**		38.33	-	-	1.08	1.042
Total		**13.00**	-	**31.23**	-	-	**1.25**	**3.944**

Recruitment:

Spp	Vernacular Name	Avg, No Recruit per/ plot	Average DBH/ cm			Average Vol/ m3		
			Interval = 4.13 year			Interval = 4.13 year		
			Ass.1	Ass.2	Growth /y	Ass.1	Ass.2	Recruit Vol /y
Meranti	*Shorea*	**4.00**		35.65			0.91	0.884
Lun	*Shorea*	**1.00**		32.50			0.74	0.179
Medang	*Beilschmiedia, Cryptocarya, Litsea*	**3.00**		32.13			0.72	0.523
Empili	*Lithocarpus, Quercus*	**1.00**		30.40			0.63	0.154
Benuah	*Macaranga*	**1.00**		30.10			0.62	0.150
Other	*Non Dip*	**8.00**		33.41			0.79	1.524
Total		**18.00**		**32.37**			**1.07**	**1.889**

Carbon Biomass

Above Ground Biomass (ABG) = (M_{trunk} + M_{leaves}+M_{branch})	**163,440 kg**
Under Ground Biomass (UGB) = 0.023 x DBH $^{2.59}$	**33,415 kg**
Total Weight of Biomass per tree = AGB + UGB	**196,854.81 kg**
Content of Carbon of tree = Total Weight of Biomass x 47% (factor emission)	**92,521,76 kg**
Content of Carbon per ha	**92.52 T/ha**

Average Mortality rates (as at 2025) = 13 trees per ha @ 3.944 m^3 per year
Average Recruitment rates (as at 2025) = 18 recruited potential yield per ha @ 1.889 m^3 per year
Content of Biomass = 92.52 Ts. Carbon Unit/ha

9. Annual Allowable Cut and Annual Cutting Area (Simulation as at) :

The AAC for the Linau FMU is **70,339** m^3 / annum while the ACA revised for the Linau FMU is **2,366** ha(s)/ Annum.

10. Harvesting System

- The harvesting system involves the selective cutting, re-entry timber harvesting of all hill forest in accordance with the term and conditions of the FTL No. T/3228;
- The FMU is also practicing the Reduced impact logging (RIL) for ground based harvesting system using modified excavator with winch are used to minimize impact to the residual stand and to the soil and water value. The FMU is to ensure that the proper planning of roads and harvesting operation is of utmost importance in pre-harvesting stage;

- The well-planned and constructed road network will enable forest harvesting operation in Linau FMU area to be carried out in a proper and economical way during the whole duration of the licenses and results in long term economic benefits for the licensee.
- The RILs systems adopted by FMU practicing the Reduced impact logging (RIL) which involves pre-harvesting, harvesting and post harvesting planning and related activities.
- The Monitoring and Control within the FMU during the pre-harvesting, harvesting and post harvesting is executed by Forestry Agency and FMU management team will follow the guidelines of pre-felling and post harvesting activities, quarterly EMR monitoring and SIA monitoring.
- Yearly Internal Audit is carried out on **May 2025** to ensure all the operation in the FMU is following the MC&I (SFM) requirements and approved FMP.

11. Environment Impact Assessment

Forest management advises continued environmentally appropriate and legal management of the Forest Management Unit (FMU) to ensure that logging activities effectively reduce the impact on the environmental values of the Linau Protected Forest. According to the Environmental Monitoring Report (EMR), the water quality results for the latest quarter are presented in the table below, demonstrating that the water quality for SLN 1 and SLN 2 remains well within the compliance limit of Class IIB of the National Water Quality Standards Malaysia (NWQSM). These results affirm that the river is not being polluted from the logging operations.

Table: **EQM Monitoring 2025 for Linau FMU**

Parameter	Compliance Limit *	EMR 1st Quarter 2024		EMR 2nd Quarter 2024		IECA (2025)		Monitor Result	
		SLN1	SLN2	SLN1	SLN2	SLN1	SLN2	Average	Compliance
pH	6.0 - 9.0	7.0	7.0	6.7	7.0	7.3	7.3	7.05	Yes
DO	5 -7	6.6	6.5	6.4	6.7	6.0	6.0	6.37	Yes
BOD	3	2	2	6	2	2.5	2	2.75	Yes
COD	25	11	10	34	11	16	16	16.33	Yes
TSS	50	3	2	21	3	9	16	9.00	Yes
Amm. N	0.3	0.02	0.02	0.21	0.02	0.19	0.2	0.11	Yes
Phosphurus	0.1	-	0.01	-	0.01	-	0.01	0.01	Yes
TCC	5,000	79	49	350	130	920	220	291.33	Yes
TFC	400	33	23	220	79	540	170	177.50	Yes
Oil & Gease	0.04; N	ND	ND	ND	ND	ND	ND	ND	Yes
									100%

2025 Compliance Status:

1. **Internal ECA Conducted:**
   - **Date:** 6–10 May 2025
   - **Auditor:** Competent internal team (NREB-trained EQM)
   - **Results:**
     - **Water Quality:** 100% compliance with Class IIB NWQSM at SLN 1 & SLN 2 monitoring points.
     - **EIA/EMP Compliance:** Full adherence to all Terms & Conditions.
     - **Preservation Measures:** Buffer zones, worker education, waste control upheld.
2. **Non-Compliance Resolution:**
   - ⚠️ **2 CPARs issued** post-Internal ECA (details in audit report).
   - **FMU Commitment:** Corrective actions underway; CPARs to be closed per ECA protocol.

Progressive Compliance Record:

- **2023 External ECA:** 8 CPARs raised and **closed within 3 months**.
- **2025:** Sustained zero-pollution operations & ecological protection.

Linau FMU has engaged a licensed scheduled waste contractor (E-Concern (M) Sdn Bhd) to transport the scheduled waste SW 305, SW 306, SW 312, SW 408 & SW 410 generated. The summary of scheduled waste in **Linau FMU from the year 2018 to July 2025** is shown below:

Year	Quantity (Drum) (Up to date of June 2025			
	SW 305	SW 306	SW 312	SW 410
2022	5	2	2	2
2023	4	2	1	1
2024	2	2	1	1
2025	1	1	1	1

12. Wildlife Management

- Linau FMU is to ensuring threatened and endangered species receive special management to protect their presence in the future, reduce negative effects of logging operation to the wildlife
- Linau FMU has installed 3 camera traps at the HCV area to monitor the wildlife and also any illegal hunting. Linau FMU has engage registered honorary wildlife ranger in patrolling and to ensure the DF circular 6/99 and WLPO 1998 being followed by the Local workers.
- The DF Circular 6/99 & SFC 1/2021 has been strictly complying with especially on hunting activity in the license area. Workers and adjacent communities are to be informed of this policy;
- New wildlife posters (Color copy) and written instruction from the Managing Director on the 'No hunting' policies should be made available on site;
- Regular patrols should be conducted to discourage and apprehend offenders. Signage and fencing can be erected at certain areas especially at the entry points to control the movement of unauthorized and illegal entries;
- To avoid road-kills, the management prescription should take into consideration to initiate speed limits for logging truck and company vehicles especially inside the logging road. This initiative also can contribute in reducing logging road accidents in the area;
- Community Education, Participation and Awareness (CEPA) program by the management is highly recommended. The management can engaged relevant agencies or organization with the program structures

13. High Conservative Values Forest (HCVF) in Year 2025 [MC & I NF I 9.3.2]

The HCVs / HCVFs presented in Linau FMU T3228 are;

- **HCV 1**: A significant number of HCV biodiversity species are present in the study area and its surroundings. signs of critically endangered (CR), endangered (EN), vulnerable (VU) and nearly threatened (NT) flora and fauna (HCV 1.2) observed during the assessment. Total of 34 fauna and 36 flora species were found to be an ERT species. There are 20 endemic fauna and 55 flora species found in the study sites (HCV 1.3). Areas for critical temporal use were also identified to be present (HCV 1.4).
- **HCV 2**: The area is an important linkage between larger forest complexes as it surrounded by logging concession, Totally Protected Areas and Forest Management Unit (HCV 2).
- **HCV 3**: Lowland and hill dipterocarp forest cover the whole area and this type of forest becoming rare and endangered as a result of the deforestation and degradation of it ecosystem (HCV 3).
- **HCV 4**: The landscape of Linau FMU is undulating and steep areas with more that 35° slope recorded (HCV 4.1).

  To ensure that this value is maintained or enhanced, a river buffer prohibiting logging operations is required, and the size of the buffer depends on the size of the river or stream (HCV 4.2). Linau FMU is adjacent to Kayan Mantarang National Park, in Kalimantan side, which is separated by political boundary between Malaysia and Indonesia. The entire FMU is within HoB initiatives site, which connecting the TPA networks between Sarawak, Sabah and transboundary networks in Brunei and Kalimantan (HCV 4.3).
- **HCV 5**: Result of the assessment for social and cultural values suggested HCV 5 is present as the Punan community of Long Lidem still depend on the forest area for their basic needs and economical source as Long Lidem located adjacent to Linau FMU.

- **Management & Monitoring status in Year 2025** :

1. In year 2022, the FMU has sent troops to patrol the buffer zone and is check to ensure the integrity of the buffer remain intact. We found there is no encroachment at IBBZ during the patrolling.
2. DF Circular 6/99 has been strictly enforced among the workers of Linau FMU especially on hunting activity in the licenses area. Lately, DF circular 6/99 has been enhanced with SFC 2021/1 and 2021/2
3. Linau FMU has installed a signboard of DF 6/99 ,SFC 2021/1 and 2021/2 at the entry gate and camp sites of Linau FMU.
4. HWR has conducted yearly awareness training to workers and adjacent communities are one of the DF 6/99 policy and WLPO 1998 sections 29 / 37 through Community Education, Participation and Awareness (CEPA) program

5. New wildlife posters and written instruction from the Managing Director on the 'No hunting' are available at been FMU office and quarters
6. FMU has set up 8 HCVs stations points of HCV 1.4 where the regular patrols have been conducted to check any encroachment on these temporal use areas.
7. The FMU has set up security gate at entry point at Linau Old Camp to control the movement of unauthorised and illegal entries;
8. In the Linau FMU High Conservation Value (HCV) Report, there is 34 fauna and 36 flora species were found to be an ERT species. There are 20 endemic faunas and 55 flora species found in the study sites (HCV 1.3). The rationale for wildlife monitoring using camera trap are to fulfill the Malaysian Criteria and Indicator for **Forest Management Certification (SFM) [for sustainable forest management]** under Principle 8, Monitoring and Assessment. Therefore, the wild life monitoring was conducted to monitor the changes of wild life composition within this FMU. There are four (4) camera traps were installed at the strategic location such as animal trails, salt licks etc. . The deployment period spanned one month, commencing on May 17, 2025, and concluding on May 30, 2025, as detailed in the table below.

Date of Monitoring		
Location	**Date**	**Environment**
Animal Trail Coupe 11AR -HCV Site 02	**17.05.2025 – 30.05.2025**	**Protection Area**
Saltlick HCV Coupe 02AR- Animal trail	**17.05.2025 – 30.05.2025**	**Active Logging**
Animal Trail Coupe 01AR – Animal trail	**17.05.2025 – 30.05.2025**	**Logged-over**
Animal Trail Coupe 14AR - HCV Site 04	**17.05.2025 – 30.05.2025**	**Protection Area**

Monitor Change for Fauna:

During this monitoring there are **Eight (8)** species has been captured by camera trap. Among this species 6 are frequent visit species as stated in below table:

Species	HCV site No. 2 Saltlick	Coupe 2 Active Active	Coupe 1 Post Post	HCV site No.4 Saltlick	Camera trap (Passive Monitor)	sighted on spot (Active Monitoring)
Hose Langur – *Presnytis hosei*	-	-	-	2	CT-1	footprint
Sambar Deer – *Cervus unicolor*	10	-	1	8	CT-1, CT-4, Ct-3	footprint
Barking Deer *(Muntiacus muntjak)*	2	1	2	3	CT-1, CT-2, Ct-3,CT -4	footprint
Pig-Tailed Macaque – *Macaca nemestrina*	-	1	-	3	-	sighted
Bornean crested fireback (Ayam Hutan) – *Lopbopborus ignita*	-		1	1	CT 3. Ct-4	sighted
Bornean water schrew - *Chimerrogale phaeuro*	2	-	-	2	CT-1, CT-4, Ct-3	footprint
Malayan porcupine *(Hystrix rachyuran)*	-	1	1	1	CT 2, 3, 4	NIL
Long-tailed macaque (Kera) – *Macaca fascicularis*	-	-	-	5		sighted
Short-Nosed Fruit Bat –Cynoterus minutus	1	-	2	3	CT-1, CT-2, Ct-3,CT -4	NIL
Little green pigeon – *Treron olex*	-	-	1	-	CT-3	NIL
Bulwer Pheasant (*Lophura bulweri*)	-	-	-	1	CT-4	NIL
Total Found	15	3	8	29	55	
Percentage	27%	5%	15%	53%	100%	

a) <u>Comparison Between HCVF Report And Current Monitoring Result (this record is updated in this MR report after the MR due to requisition from the Forest Manager)</u>

From a number of image capture by camera trap we can conclude there is no changing on the wild life composition within this FMU. This is because some of the most common species such as barking deer, sambar deer, porcupine, bearded pig etc. are the common image capture by camera trap. Other than that, some image of the rare species like Hose's Grey Langur, Bornean Clouded Leopard, Leopard Cat, and Mongoose species also capture by camera trap.

Case of Illegal Activities in related to DF 6/99 As at 2023- 2025 reported by HW ranger:

Illegal Activities	Year 2023	Year 2024	Year 2025
Illegal Hunting	0	0	0
Trading of wildlife meat	0	0	0
Lack of Knowledge	0	0	0
Transportation of wildlife meat	0	0	0
Case against WLPO 1998 section 29 found at security check point	0	0	0
Total	0	0	0

b) **Change of Fauna or Wildlife for the Year 2025**

Reference	Conservation Status	Total (HCV)	Total (2025)
Wild Life Protection Ordinance, 1998	Totally Protected (TP)	11	12
	Protected (P)	24	24
	Not Protected (NP)	3	3
International Union for Conservation of Nature (IUCN) Red List	Least Concern (LC)	20	20
	Near Threatened (NT)	5	3
	Vulnerable (VU)	9	11
	Endangered (EN)	2	3
	Critically Endangered (CR)	1	2
	Not Listed (NL)	2	1
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	Appendix I	3	2
	Appendix II	3	3
	Appendix III	1	1
	Not Listed	31	31

c) Monitor change of Flora as at Year 2025

From the monitoring of changes of flora, we found the TOP 10 dominant species at Linau FMU in year 2025 as shown in below table:

No.	Species Code	Family	Vernacular Name	Scientific Name	Quantity	Percentage (%)
1	EMPN	Non-Dipterocarpaceae	Empenit	*Lithocarpus*	1113	17.66%
2	MRTM	Dipterocarpaceae	Meranti Merah	*Shorea*	1013	16.08%
3	MEDN	Non-Dipterocarpaceae	Medang	*Beilschmiedia, Cryptocarya, Litsea*	815	12.93%
4	KLPN	Non-Dipterocarpaceae	Kelampayan	*Neolamarckia cadamba*	651	10.33%
5	BENU	Non-Dipterocarpaceae	Benuah	*Macaranga*	517	8.21%
6	UBAH	Non-Dipterocarpaceae	Ubah	*Syzygium*	409	6.49%
7	AKAU	Non-Dipterocarpaceae	Akau	*Xylopia*	236	3.75%
8	TERE	Non-Dipterocarpaceae	Terentang	*Campnosperma, Buchanania*	173	2.75%
9	ASAM	Non-Dipterocarpaceae	Asam	*Mangifera*	117	1.86%
10	KEBE	Non-Dipterocarpaceae	Kedang Belum	*Millettia*	114	1.81%

d) Moderate species:

The moderate species from the 2024 monitoring flora as below with range from 11 – 49:

No.	Species Code	Family	Vernacular Name	Scientific Name	Quantity	Percentage (%)
11	TERA	Non-Dipterocarpaceae	Terap	*Artocarpus*	107	1.70%
12	BERA	Non-Dipterocarpaceae	Berangan	*Castanopsis*	104	1.65%
13	SELD	Non-Dipterocarpaceae	Seladah	*Canarium, Dacryodes, Haplolobus, Santiria*	82	1.30%
14	NGLS	Non-Dipterocarpaceae	Ngilas	*Parastemon*	81	1.29%
15	BINU	Non-Dipterocarpaceae	Binuang	*Octomeles sumatrana Miq.or Macaranga*	71	1.13%
16	ARAU	Non-Dipterocarpaceae	Arau	*Cephalomappa*	62	0.98%
17	GERO	Non-Dipterocarpaceae	Geronggang	*Cratoxylum*	58	0.92%
18	NYTO	Non-Dipterocarpaceae	Nyatoh	*Madhuca, Palaquium, Payena*	54	0.86%
19	REHU	Non-Dipterocarpaceae	Rengas Hutan	*Drimycarpus, Gluta, Melanochyla, Semecarpus*	45	0.71%
20	RESK	Dipterocarpaceae	Resak	*Vatica*	43	0.68%
21	NLIN	Non-Dipterocarpaceae	Nyalin	*Xanthophyllum*	37	0.59%
22	SIMP	Non-Dipterocarpaceae	Simpoh	*Dillenia*	35	0.56%
23	KPXX	Non-Dipterocarpaceae	Kumpang	*Gymnacranthera, Horsfieldia, Knema, Myristica*	32	0.51%
24	LUIS	Dipterocarpaceae	Luis	*Hopea*	29	0.46%
25	URMT	Dipterocarpaceae	Urat Mata	*Parashorea*	29	0.46%
26	LUNX	Dipterocarpaceae	Lun	*Shorea*	23	0.37%
27	BAYU	Non-Dipterocarpaceae	Bayur	*Pterospermum*	22	0.35%
28	KEBA	Non-Dipterocarpaceae	Kepayang Babi	*Scaphium, Mezzettia*	17	0.27%
29	KEMS	Non-Dipterocarpaceae	Kembang Semangkok	*Scaphium*	16	0.25%
30	LGAI	Non-Dipterocarpaceae	Legai	*Adinandra*	16	0.25%
31	KASA	Non-Dipterocarpaceae	Kasai	*Pometia pinnata*	15	0.24%
32	SLGB	Dipterocarpaceae	Selangan Batu	*Shorea*	15	0.24%
33	SNKU	Non-Dipterocarpaceae	Sengkuang	*Dracontomelum dao*	15	0.24%
34	KAMA	Non-Dipterocarpaceae	Kayu Malam	*Diospyros*	12	0.19%
35	SELR	Non-Dipterocarpaceae	Selunsur	*Tristaniopsis*	12	0.19%
36	KRXX	Dipterocarpaceae	Keruing	*Dipterocarpus*	11	0.17%
37	RANG	Non-Dipterocarpaceae	Ranggu	*Azadirachta excelsa*	9	0.14%

e) Lowest species:

No.	Species Code	Family	Vernacular Name	Scientific Name	Quantity	Percentage (%)
50	TPHN	Non-Dipterocarpaceae	Tampar Hantu	*Sindora*	3	0.05%
51	BANT	Non-Dipterocarpaceae	Bantas	*Blumeodendron, Neoscortechinia, Ptychopyxis, Trigonostemon*	2	0.03%
52	BIWK	Non-Dipterocarpaceae	Bintawak	*Artocarpus anisophyllus*	2	0.03%
53	BIRI	Non-Dipterocarpaceae	Biris	*Sterculia*	2	0.03%
54	BJAN	Non-Dipterocarpaceae	Bajan	*Kokoona*	2	0.03%
55	MYAM	Non-Dipterocarpaceae	Menyam	*Glochidion*	2	0.03%
56	RAMX	Non-Dipterocarpaceae	Ramin	*Gonystylus*	2	0.03%
57	SEGE	Non-Dipterocarpaceae	Segera	*Aglaia, Chisocheton, Dysoxylum*	2	0.03%
58	BAHU	Non-Dipterocarpaceae	Bawang Hutan	*Scorodocarpus borneensis*	1	0.02%
59	DURN	Non-Dipterocarpaceae	Durian	*Durio*	1	0.02%
60	JELU	Non-Dipterocarpaceae	Jelutong	*Dyera*	1	0.02%
61	KDIS	Non-Dipterocarpaceae	Kandis	*Garcinia*	1	0.02%
62	PERA	Non-Dipterocarpaceae	Perah	*Elateriospermum tapos*	1	0.02%
63	PSNG	Non-Dipterocarpaceae	Pisang	*Mezzettia parvifolia*	1	0.02%
64	PTOH	Non-Dipterocarpaceae	Pitoh	*Swintonia*	1	0.02%
65	RAMA	Non-Dipterocarpaceae	Ramin Telur	*Gonystylus*	1	0.02%
66	SAGA	Non-Dipterocarpaceae	Saga	*Adenanthera, Ormosia bancana*	1	0.02%

2025 Monitoring of Flora in Linau FMU :

a) The forest composition is highly skewed towards a few dominant species, particularly species like Empenit, Meranti Merah, and Medang. These species should be considered for conservation and management strategies due to their abundance.

b) The low representation of Dipterocarpaceae species suggests that they are less common in the surveyed area. Efforts may be needed to protect and possibly increase the population of these species, given their ecological importance.

c) The significant presence of less common species highlights the biodiversity within the forest, but also indicates that many species are present in very low numbers. Conservation efforts should focus on protecting these rarer species to maintain ecological balance.

d) The data can inform sustainable logging practices, ensuring that the most abundant species are harvested in a way that does not threaten their long-term viability, while also protecting the less common and ecologically significant species.

2025 HCVs Monitoring

1. Linau FMU has demarcated SBZ and No entry signboard along the stream riparian area and protecting the Ensurai trees in the FMU, to ensure the effectiveness of management prescription of HCV3 in the FMU.
2. The FMU has yearly patrolled the license boundary. In the same time, the patrolling includes the SBZ along the main river.
3. Demarcation of Pig Wallow, Bat Roosting and 4 saltlicks had been established and monitoring;

HCVA	Demarcated	Last Monitored	Status
Bat Cave	12/01/24	20.01.25	Active
Saltlick C11	25/02/24	10.03.25	Active
Wild Boar Wallow	28/02/24	19.03.25	Active
Saltlick C14	16/03/24	16.03.25	Active
Nesting C-19	03/04/24	15.04.25	Active
Saltlick C-19	27/04/24	18.02.25	Active
Saltlick C-21/22	08/05/24	13.05.25	Active
Saltlick C-22/23	09/05/24	13.05.25	Active
Terrain 4 c9,12,18 &20	-	28.05.25	Present
Source Drinking/ water intake of Long Lidem	08/09/24	18.02.25	With Community No Disturbance

14. Community Development

Community development in Linau FMU is focusing in maintaining a balance between environment, economic and social objectives of the management of forest resources by

i. Better anticipation and management of an ever-expanding spectrum of risk regards to CSR issues;
ii. Improved reputation of Shin Yang FMU sustainable forest management to the outsiders;
iii. Enhanced ability to recruit, develop and retain staff;
iv. Improved ability to attract and build effective and efficient supply chain relationships.
v. Enhanced operational efficiencies and cost savings; and
vi. More robust "social license" to operate in the community

The Linau FMU Community Development Plan is using Plan- Do-Check-Improve- Cross Check approach and the consultation with Local Community is communicated with free, prior and informed consent to other parties.

15. Social Impact Assessment & Monitoring (Update as at May 25) [MC&I 8.2b].

The monitoring of the SIA mitigation and enhancement measures has been conducted to compliance monitoring to ensure compliance with the recommended mitigation / enhancement measures; and impact monitoring of relevant key social impacts after the forest harvesting or conversion activities to evaluate the effectiveness of the mitigation / enhancement measures. The satisfaction of the Long Lidem to Linau Forest Management from the year 2017-2023 is

Table Comparison Social Impact Monitoring Report (SIMR) for year 2019-2025

Table of Social Impact Monitoring Key Social (% of Good Impact)

No	SIA Key Social Impact	Year 19/20 (%)	Year 21 (%)	Year 22 (%)	Year 23 (%)	Year 24 (%)	Year 25 (%)	Mean
1	Water and River Quality	100	100	100	100	100	100	100
2	Local Economy	100	100	100	100	92.30	92.3	97.43
3	Socio-cultural Life	100	100	100	100	100	100	100
Average Total Percentage X /27		100	100	100	100	97.43	97.43	99.14

16. Safety and Health Environmental

To improve the awareness of Occupational Safety & Health among the workers and employers, Shin Yang has established Safety and Health Committee in Linau FMU FMU and is leaded by the camp manager (chairman). Apart of the chairman, two secretaries have been selected for the SHC Committee, and there are representative for both management and employees. The function of the Safety and Health committee is to:

- Facilitating co-operation between employers and employees to instigate, develop and carry measures to ensure safety and health of workers;
- Assisting in developing health and safety policies, procedures and systems for the workplace;
- Other functions agreed by the safety and health committee; and
- Disseminate of safety and health matters and planning that had discussed to employees
- The FMU has committed to ensure safety at working place through the safety policy written and signed by the Executive Director on 1st August 2020.
- The FMU collaborates closely with SFC and Sarawak Timber Association (STA) in their design and implementation of training programs for job specific skills, health and safety and venue of vocational training in the field of forestry and forestry industry.
- Accident cases from year **2020 – 2025** are at below;

Accident Record - Linau FMU									
2021		2022		2023		2024		2025	
Fatality	0	Fatality	0	Fatality	0	Fatality	0	Fatality	0
LTI	0	LTI	1	LTI	0	LTI	0	LTI	0
FAC	5	FAC	4	FAC	2	FAC	0	FAC	0

LTI - Lost Time Injury; MTC - Medical Treatment Case ; FAC - First Aid Case

17. Worker Representative

Management has committed with the statement dated 7tht May 2022 that the management is not objection the free of workers within Linau FMU to join into trade union in accordance with ILO 87 and 98. Worker representative has been set up to have a free, prior, inform and consent in negotiation with the management of the FMU.

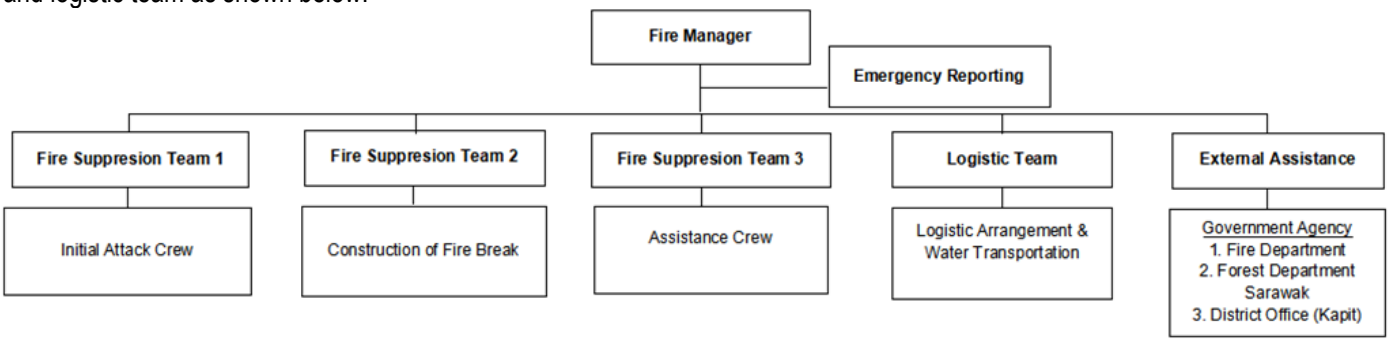
Monitoring Status:
In the year 2025, a workers' representative meeting was convened and chaired by Mr. Jeffery at the Linau Forest Management Unit (FMU) office on **23th May 2025**

18. Forest Fire Management Plan

Forest fire represent one of the greatest threat to the environment and natural species. Shin Yang Sdn Bhd has taken an aggressive approach towards the protection of its forest management unit from forest fire. MC&I (SFM) has also outlined the requirement of fire prevention and control plan to be prepared and implemented under MC&I (SFM) [indicator 6.5.5]. Despite the geological condition of Nibong FMU has greatly reduced the risk of forest fire by grating high annual mean of rainfall, many rivers as natural fire barrier, high humidity and cool climate within Nibong FMU most of the time around the year, Shin Yang Sdn Bhd has never ignore the threat of forest fire. Thus, Shin Yang Sdn Bhd developed preventive measures and mitigation measures as to ensure lowest possibility and lowest impact of forest fire towards ecological, economical and sociological.

Preventive Measures	Mitigation Measures
No Open Burning	Forest patrolling system
Awareness of FMU workers	Formation of Forest Fire Management Team
Preventive maintenance on equipment and machinery	Adequate provision of Fire Fighting equipment and machinery
Constant review and monitoring of forest fire management plan efficiency & effectiveness	Emergency Response and Preparedness

Forest Fire Management Team has been formed by several group of workers to specifically deal with Forest Fire if it happens. The structure of the team is designed with Incident Commander (Fire Manager), Emergency Reporting, 3 team of fire suppression team and logistic team as shown below:



19. Carbon Emission (GHG) for Linau FMU Logging Activities (MC&I (SFM) Indicator 5.5.2)

Type of GHG	Assessment 2025	Future Forecast
Scope 1	Present	Present
Scope 2	Present	Present
Scope 3	No Present	Potential Present

Scope 1 Emissions

Activities	COe for Year 2025 (Jan-May)	
Log Loader	28.78	tons COe
Logging Truck:	107.55	tons COe
Road Maintenance	93.44	tons COe
Log Harvesting	310.17	tons COe
Surveyor	53.45	tons COe
Transport	21.02	tons COe

Generator	15.22	tons COe
Total Scope 1	**629.63**	**tons COe**

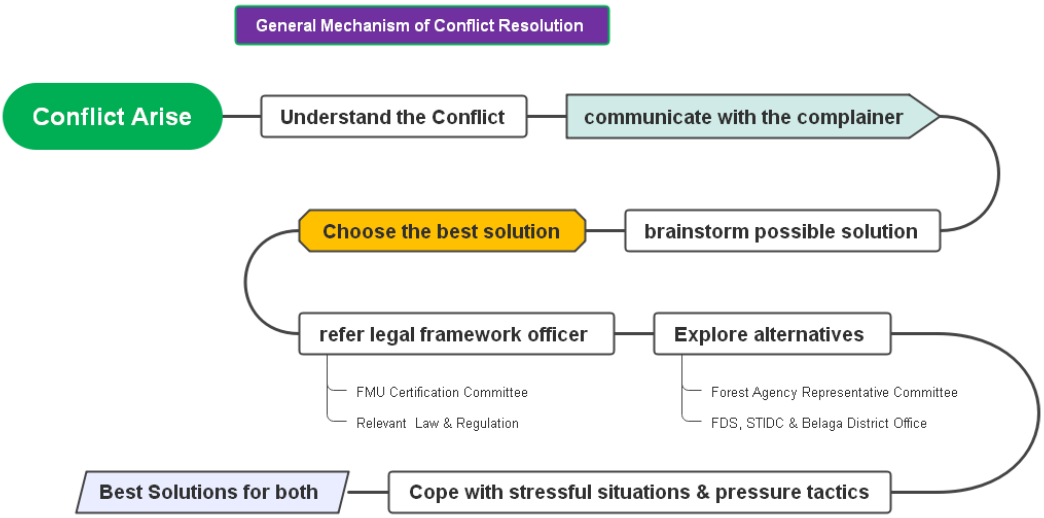
Scope 2 Emissions
Scope 2 emissions typically include indirect emissions from the consumption of purchased electricity, steam, heating, and cooling. Since the provided data focuses on machinery emissions, which are usually Scope 1, there are no Scope 2 emissions mentioned. However, if there were not electricity consumption data for the operation as the FMU is using generator.
Total Scope 2 Emissions: 97.91 t CO2

Scope 3 Emissions
Scope 3 emissions are all other indirect emissions not covered in Scope 2, such as emissions from the production of purchased goods and services, business travel, employee commuting, waste disposal, and others. The provided data does not include these aspects, so there are no Scope 3 emissions listed in the data.
Total Scope 3 Emissions: 0 ton of COe

20. SFM Cost & Expenses

As at year end report Linau FMU as at year end in Year 2024 of management review has contributed Total Operation Cost and Expenditure until **Dec 2024** recorded as **RM 12 mils.**

21. Mechanism of Conflict Resolution



Any conflict arise, may obtain the **requisition / complain form** at FMU office or contact to **086-449914 to Ms Brenda (FMU Liaison Officer).**

22. Silviculture

Silviculture in Linau FMU is the science and practice of managing forest growth, composition, health, and quality to ensure sustainability and productivity. At Linau FMU, it plays a vital role in balancing ecological, economic, and social needs.

🔍 Objectives of Silviculture Management

The main goal is to improve and sustain the forest for long-term timber production and biodiversity. Forest managers consider:

- Desired future forest condition
- Economic timber species
- Tree growth performance
- Light conditions for seedling growth
- Wildlife conservation
- Sustainable harvesting opportunities

🪵 Challenges from Past Logging

Previous logging with heavy machinery caused:

- Soil erosion and compaction
- Loss of nutrients
- Damage to residual trees .This led to poor natural regeneration, requiring restoration.

📋 Post-Harvest Diagnostic Sampling

After logging, trained crews evaluate forest conditions by:

- Assessing remaining valuable trees and regeneration potential
- Checking damage and identifying areas needing treatment
- Using inventory data to guide decisions

Restoration decisions depend on forest health, scored as:

- **Very Good, Good, Moderate, or Poor**
  If areas are Poor or Very Poor, silviculture treatments like **enrichment planting** are implemented.

💻 Decision Support System (SDSS)

A system is used to:

1. Identify degraded blocks
2. Choose appropriate treatments (planting, thinning, etc.)
3. Prioritize treatment areas based on road access

🌱 Silviculture Activities & Operation Plan (2025)

Yearly Planting target of Linau FMU plans is:

- Plant **120,000** seedlings
- Use **local timber species** with spacing of 3–6 meters

Month	Planning	
	Target	Accumalated
January	1,000	1,000
February	1,000	2,000
March	1,000	3,000
April	1,000	4,000
May	1,000	5,000
June	1,000	6,000
July	1,000	7,000
August	1,000	8,000
September	1,000	9,000
October	1,000	10,000
November	1,000	11,000
December	1,000	12,000

-

🛠️ Silviculture Treatment Methods

Options include:

- **Selective harvesting** if enough trees remain
- **Climber cutting** to reduce competition

- **Liberation thinning** to help valuable trees grow
- **Do nothing** if the area is not ready for treatment

🌳 Enrichment Planting

When natural regeneration is poor, enrichment planting:

- Supplements valuable tree species (e.g., meranti, kapur)
- Includes fruit trees to support wildlife
- Must occur within 3 years after logging

🌼 Species Selection Criteria

Planted species are chosen for:

- Fast growth
- High survival rates
- Timber and ecological value
  Examples: *Shorea spp., Neolamarckia cadamba, Terminalia catappa*, and local fruit trees like durian and mango.

👩‍🌾 Nursery & Seedling Management

The Danum Nursery supplies seedlings and wildings, using:

- Controlled watering and shading
- Hardening before planting
- Proper seed and wilding collection methods

Good management improves seedling health and success after planting.

🌿 Conclusion

Silviculture at Danum FMU ensures long-term forest health and productivity through careful planning, monitoring, and restoration. These efforts support both sustainable timber production and biodiversity conservation for future generations.

23. **Management Review** has been conducted and chaired by the Executive Director & CEO of SYSB, Mr. Andy Wong on 27th May (Monday) , 2024. at Miri Head quarter and the continual improvement covered;

24. **Publish Website :** http://www.shinyang.com.my / update as at **31st May, 2025**.

END OF THE SUMMARY FOR LINAU FMU T-3228