



PUBLIC SUMMARY

**FOREST PLANTATION
MANAGEMENT PLAN
FOR**

DAIKEN FPMU

LPF/0003

1. INTRODUCTION OF DAIKEN FPMU

In 1997, the Sarawak State Government approved a license for a land area approximately 5,901.50 hectares in size in the Sawai - Similajau area for the purpose of establishing a plantation forest (**Figure 1.1**). This area was designated as a plantation forest with the purpose of producing wood material for use in the manufacture of Medium Density Fibreboard. The license holder, Daiken FPMU, has subsequently developed most of the area into sustainably managed Industrial Tree Plantations. In 2007, Daiken FPMU applied for additional land and the Sarawak State Government have considered an application for approximately 438 hectares in 2 parcels (labelled A & B on Figure 1.1 below) as extension to LPF/0003.

The approval of the extension areas is important to ensure uninterrupted supply of raw materials to the MDF plant. The current mill demand is 180,000m³ per annum and the total ITP wood supply possible from the LPF0003 area, including extension, is approximately 80,000m³/pa. This is the first Forest Plantation Management Plan (FPMP) of Daiken FPMU to define the scope and prescribed activities for the management of the License area for 10 years period commencing from January 2023 to January 2033. The mid-term review of the FPMP shall be at the year of 2028.

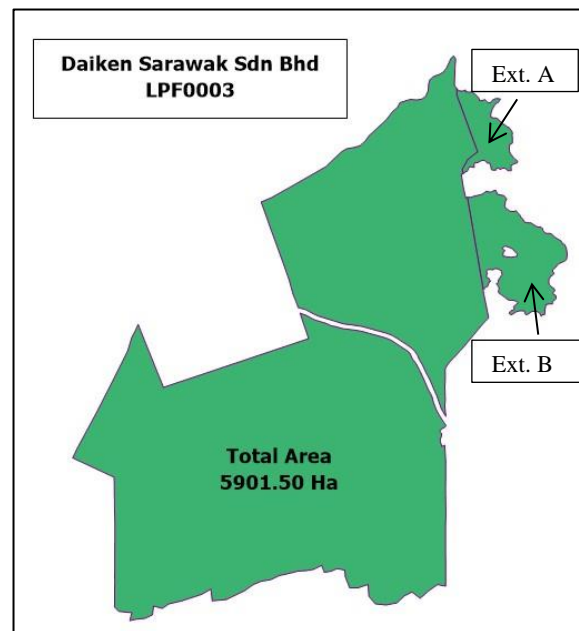


Figure 1.1: Daiken FPMU Area

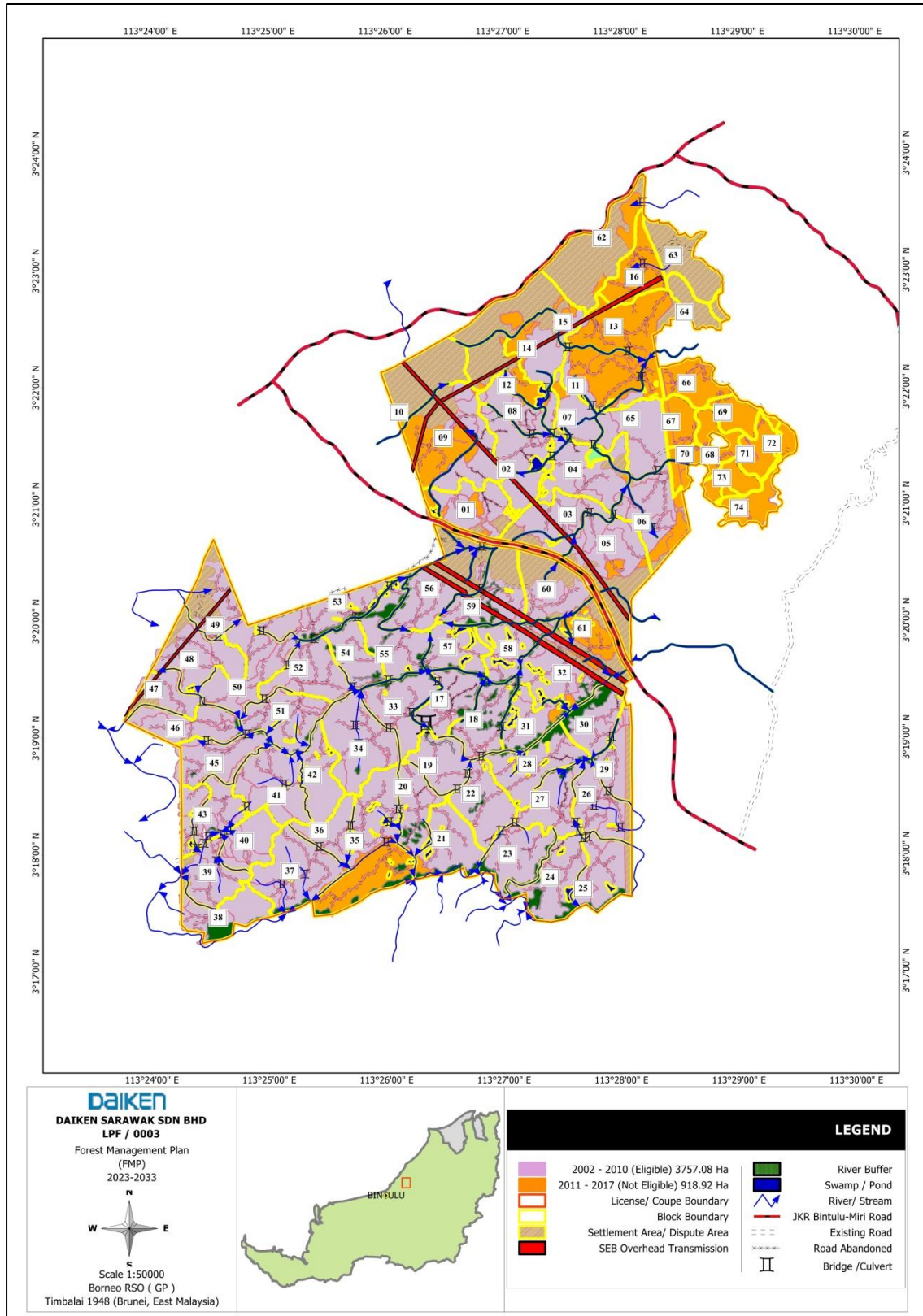



Figure 1.2: Location of Daiken FPMU (LPF/0003)

2. POLICY OF COMMITMENT


Daiken FPMU has a number of policies that clearly stated the company position on the various subject matters concerned. Daiken FPMU is committed forest plantation management sustainability on ITP under Malaysian Criteria and Indicators for Sustainable Forest Management (MC&I) LPF/0003 and to comply with the Malaysian criteria and indicator of MTCCS by the Malaysian Timber Certification Council.

	DAIKEN SARAWAK SDN. BHD.
Title: Commitment Policy "Dasar Komitmen"	Doc No: 005 Rev No: Effective Date: 2 Jan 2023 Page No: 1 of 1 Approved By: Edward Lim

Daiken Sarawak Sdn Bhd was designated as a plantation forest with the purpose of producing wood material for use in the manufacture of Medium Density Fibreboard. Manage tree planting activities and harvesting activities at Daiken Bakun Camp (LPF/0003). This Policy of Commitment defines the company's commitment towards the Malaysia Criteria and Indicators for Malaysian Criteria & Indicator for Sustainable Forest Management (MC&I). This Policy will be a guideline for all levels of our employees and stakeholders in carrying out the company's business in a conscience manner.

Daiken Sarawak Sdn Bhd telah ditetapkan sebagai hutan ladang dengan tujuan menghasilkan bahan kayu untuk digunakan dalam pembuatan Papan Gentian Ketumpatan Sederhana. Menguruskan aktiviti penanaman pokok dan aktiviti penuaian di Kem Daiken Bakun (LPF/0003). Dasar Komitmen ini mentakrifkan komitmen syarikat terhadap Kriteria dan Petunjuk Malaysia bagi Kriteria & Petunjuk Malaysia untuk Pengurusan Hutan Lestari (MC&I). Polisi ini akan menjadi garis panduan untuk semua peringkat pekerja dan pihak berkepentingan kami dalam menjalankan perniagaan syarikat secara hati nurani.

- 1. Comply with all applicable laws, regulations and requirements related to planted forest management.**
Mematuhi semua undang-undang, peraturan dan keperluan yang berkaitan dengan pengurusan tanaman hutan.
- 2. Provide a safe workplace area according to occupational safety and health policy and ensure all employees are exposed or trained to occupational safety and health.**
Menyediakan kawasan tempat kerja yang selamat mengikut dasar keselamatan dan kesihatan pekerjaan dan memastikan semua pekerja didedahkan atau dilatih dengan keselamatan dan kesihatan pekerjaan
- 3. Ensure environmental degradation and pollution are prevented or controlled through an effective methods fulfil all conditions in the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP).**
Memastikan kemerosotan dan pencemaran alam sekitar dicegah atau dikawal melalui kaedah yang berkesan dengan memenuhi perkara yang terkandung di dalam Penilaian Kesan Alam Sekitar(EIA) and juga Pelan Pengurusan Alam Sekitar (EMP).
- 4. Promotes the use of environmentally friendly chemicals while minimizing the use of chemicals in best management practices and ensure only use approved and registered chemicals with the Pesticides Board of Malaysia under Pesticides Act 1974.**
Menggalakkan penggunaan bahan kimia mesra alam di samping meminimumkan penggunaan bahan kimia dalam amalan pengurusan baik dan memastikan hanya menggunakan bahan kimia yang diluluskan dan berdaftar dengan Lembaga Racun Perosak Malaysia di bawah Akta Racun Perosak 1974
- 5. Improved the skills, knowledge and competency of employee and local community through relevant trainings.**
Meningkatkan kemahiran, pengetahuan dan kecekapan pekerja dan komuniti setempat melalui latihan yang berkaitan.
- 6. Helping the local community by providing job opportunities and recognised all customary laws & Native Customary Right as defined by regional laws.**
Membantu masyarakat setempat dengan menyediakan peluang pekerjaan dan mengiktiraf semua undang-undang adat & Hak Adat Anak Negeri seperti yang ditakrifkan oleh undang-undang wilayah.


Edward Lim
Director/ Operation Manager

3. MANAGEMENT OBJECTIVE

The overall management objective of Daiken FPMU is to ensure the sustainable timber production of the license area with the balance in economic, environment and social. The timber produce from the plantation is important to sustain the quality MDF manufactured by the company.

4. MANAGEMENT SYSTEM

To increase value of plantation assets under our systematic control using improved genetic seedling, superior silviculture practices to sustain economic production of logs. We will achieve this objective while adopting responsible forestry practices certified under the Malaysia Criteria and Indicators for Sustainable Forest Management.

5. FOREST RESOURCE DESCRIPTION

5.1 Geology soil

Based on the Geological Map of Sarawak at 1:500,000 scales, the license area is underlain entirely by sedimentary rocks material. This substrate has given to predominantly Red-Yellow Podzolic (87.4%) solid with some alluvial soils (12.6%) found in isolated pockets (Agriculture Department). Among the podzolic group the predominant series is the Bekenu Series (73.8%) which can be described as fine, loamy and non-calcareous. The other dominant Podzolic soil group belongs to the Merit Series (13.6%) which differs from the Bekenu series being predominantly clayey instead of loamy. The alluvial soils fall into the Seduai series which can be described as clayey soils originating from non-calcareous sedimentary rocks.

5.2 Growing Timber Stock

The forest in license area that has been logged over and developed for planting of fast growing species with rotation of 5-10 years depend on raw material demand. Non-timber product such as rattan, bamboo, wild vegetable and wild vegetable and fruits are still available at none develop area such river buffer and terrain IV.

6. ENVIRONMENTAL LIMITATION

Generally, the license area is higher along its western and northern fringes, sloping towards Sg Lavang. Elevations range from 15 m (50 ft) above the mean sea level (amsl) in the valleys and along the riparian areas to over 158m (520 ft) amsl at the northwest, within Block 28. The bulk of the Project Site (99.6%) is endowed with undulating to steep terrain where the slopes are in the 5-35o range (Terrain Class II and Class III) while the remaining 0.4% (or 26.2 ha) has very steep slopes (>35o or Terrain Class IV).

7. FOREST ZONING

From the overall area of Daiken FPMU, the area divided into 2 main zones which is ITP and non-ITP area. The zoning was conducted based on development status, forest resources, terrain condition and sensitive area. In the non-ITP area, the sub zoning included Natural Forest Management (NFM) area, ponds, riparian buffers, roadways, swampy area, shifting cultivation and settlement area.

Camp and other facilities	Area(ha)	Percent(%)
Homesteads and farmlands	963.33	16.2
Burial Ground	3.10	0.1
Riparian Buffer and Conservation	226.20	3.8
Steep Area (Terrain IV)	26.20	0.4
NON-ITP AREA	1,218.83	20.50
Camp and other facilities	6.67	0.1
Planted area	4,676.00	78.4
ITP AREA	4,682.67	78.5
TOTAL AREA	5,901.50	100.0

Table 1.1: Current land use

8. SOCIO-ECONOMIC CONDITION

Based on the data obtained during the Consultant's visits, about twenty-nine (29) settlements are found inside and within 3 km of the Project Site [Note: there is one longhouse with two Tuai Rumah: TR Dana and TR John. This longhouse is considered as one settlement in this study. Out of these 29 settlements, three of the settlements namely Rh Sanak, Rh Dundang and Kpg Wawasan Jaya are located inside the Project Site. Together, there are approximately 4,100 people in 792 doors, thereby averaging about 5 persons per door. The statistics of these settlements were presented and their locations are shown:

	Settlement	Ethnic	Doors	Population	Water Supply	Power Supply
1.	Rh Sanak*	Iban	28	233	Rain water	SESCO
2.	Rh Dundang*	Iban	20	115	Rain water	SESCO
3.	Kpg Wawasan Jaya*	Malay	46	250	Rain water	SESCO
4.	Rh Kedi	Iban	136	200	Rain water	SESCO
5.	Rh Empaling	Iban	38	230	Gravity-feed	SESCO
6.	Rh Rading	Iban	34	150	Gravity-feed	SESCO
7.	Rh Dana/ Rh John	Iban	30	180	Rain water	SESCO
8.	Rh Dayong	Iban	10	60	Rain water	SESCO
9.	Rh Padang	Iban	22	120	Rain water	SESCO
10.	Rh Seliong	Iban	20	104	Rain water	SESCO
11.	Rh Bangau	Iban	34	168	Rain water	SESCO
12.	Uma Luhut	Kayan/Kenyah	20	110	Rain water	SESCO
13.	Rh Sumok	Iban	27	180	Rain water	SESCO
14.	Rh Christopher	Iban	22	125	Rain water	SESCO
15.	Kpg Wawasan Raja Wali	Malay	65	450	Rain water	SESCO
16.	Rh Kepalin	Iban	20	208	Rain water	SESCO
17.	Rh Nanang	Iban	12	97	Rain water	SESCO
18.	Rh Sigah	Iban	17	92	Rain water	SESCO
19.	Rh Kutau	Iban	13	65	Rain water	SESCO
20.	Rh Mandau	Iban	15	118	Rain water	Generator
21.	Rh Albert	Iban	12	70	Rain water	SESCO
22.	Rh Sibat	Iban	30	150	Rain water	Generator
23.	Rh Tanjung	Iban	10	42	Rain water	SESCO
24.	Rh Unong	Iban	16	80	Rain water	SESCO
25.	Rh Jarau	Iban	16	115	Rain water	SESCO
26.	Rh Jacob	Iban	33	160	Rain water	SESCO
27.	Rh Bika	Iban	16	90	Rain water	SESCO
28.	Rh Joseph	Iban	20	92	Rain water	Mill
29.	Rh Demong	Iban	10	46	Rain water	Mill
	Total		792	4,100		

Table 1.2: Settlements in the Vicinity of the Project Site

Changes in lifestyle and culture are parts and parcels of economic progress that cannot be mitigated. Such changes should not be viewed too negatively. They will lead to a general increase in productivity, income and standard of living.

9. PLANTATION ESTABLISHMENT

9.1 Choice of Species

Planting the right species is an utmost important factor that decides the successful of the plantation beside the least amenable factors such as soil type and climate. Besides that, the right species based on product types with the highest recovery and product quality is also considered to maximize the revenue of the company.

In 2002 a decision was taken to establish *Acacia mangium* based on the research conducted by Tsuyoshi Miyashiro (Forest Engineer) of the Techno Forest Co. Ltd. The Daiken FPMU site is comparable to Forestry Department 's planted areas in Similajau, Labang and the Niah Forest Reserve and it was judged from the growth results in these areas, that *Acacia mangium* varieties, which are the least site selective, should perform well provided seed provenance is carefully selected and maintenance was adequately carried out. *Acacia mangium* exhibits a host of other characteristic that have made it the first-choice plantation species in South East Asia.

9.2 Nursery Practices

Based on the proposed annual planting rate of approximately 500-700 ha and an intensity of approximately 1600 plants to a hectare, the total seedling requirement annually (with a 40% allowance to cover nursery mortality, culling rejects and mortality in the field) is between 1 million to 2 million seedlings. Currently, also seedling requirements are being met by external nurseries, many of which supply improved genetic material from their own research and seed production plantings. Consequently, Daiken has not constructed its own nursery. However, as it may do so in the future.

The basic criteria for a nursery to handle this output would be a few hectares of relatively flat land with availability of water throughout the year. Daiken FPMU has identified a site located on the flat ground where the Bintulu-Bakun road crosses the Sungai Seran.

9.3 Site Preparation

Site preparation is major criteria before carry out planting the tree. All debris and vegetation have to clear. Site preparation activities remove or reduce competing vegetation, reduce or remove unwanted trees and logging debris and prepare the soil to promote the growth and survival of desired tree species.

9.4 Planting

The planting material is purchased from Borneo Tree Seeds, Seedling Supply Sdn Bhd, and GP Pusaka Sdn Bhd. Hence no nursery site is allocated for the Plantation. The purposed planting density is 1,600 trees per hectare with spacing 2.5m x 2.5m for 2nd Cycle and 3rd Cycle in the plantation area change from 1,111 trees with spacing 3.0m x 3.0m. The total plantable area is about 4,676 ha (1st Cycle), 4,289 ha (2nd Cycle-In progress) and 716.96ha (3rd Cycle-In progress). Approximately 4,418 ha total final area planted and 5% allowance for culling and res- supplying, approximately 7,422,240 seedlings will be required.

Species Planted	Planting Year														Total Ha
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2015	2016	2017	
Species Planted	173.53	312.33	307.29	155.64	228.11	423.12	306.10	434.72	510.34	425.89	-	20.77	290.24	61.69	3,649.8
	28.00	0.00	0.00	166.21	158.53	95.00	220.00	238.16	0.00	62.50	-	-	-	-	968.4
Eucalyptus Pelita	-	-	-	-	-	-	-	-	-	-	-	-	-	30.78	30.8
Eucalyptus deglupta	-	-	-	-	-	-	-	-	-	-	1.80	-	-	-	1.8
Shorea macrophylla	-	-	-	-	-	-	-	-	-	-	1.25	-	-	-	1.3
Falcataria Albizia	-	-	-	-	-	-	-	-	-	-	24.00	-	-	-	24.0
Yearly Total	201.53	312.33	307.29	321.85	386.64	518.12	526.10	672.88	510.34	488.39	27.05	20.77	290.24	92.47	4,676.00

Table 1.3: 1st Cycle Planting

10. SILVICULTURE

10.1 Weed Control

The control of weeds in the plantable area started just after site preparation and before planting. This weeding is to ensure that the undesirable growth is kept in check allowing the seedlings the full opportunity to establish, especially in the first 12 months and when the fertilizer is applied. Weeds control are important to ensure the planted seedling grow without competition for the available nutrients and moisture in the soil.

11. MONITORING OF FOREST GROWTH

11.1 Establishment of Permanent Sample Plots (PSPs)

Daiken FPMU just started 242 plots and 30m x 30m sized in 2022. PSP are to determine growth rate yield of all harvested products so that data can be used to determine estimate production. The plot area is randomly chosen, monitored and measured by Daiken Plantation staff once a year. Daiken Sarawak Sdn Bhd carried out drone monitoring every 6 months to determine mortality in every planted area to determined yield. All PSP will be re-accessing on September – October 2023 to see growth performance.

11.2 Growth Rates of the Planted Forest

Based on data retrieved from PSPs, based on actual harvesting 1st cycle and 2nd cycle. Calculation on UAV data based on High, Medium and Low Stocking Area.

12. ENVIRONMENTAL REQUIREMENT/MONITORING

12.1 Environmental Impact Assessment (EIA) Report

The Environmental Impact Assessment report for the LPF/0003 was approved by NREB Sarawak [(15) NREB/6-11/85 dated 4 July 2001].

12.2 Environmental Management Plan (EMP)

An EMP is recommended to be outlined in order to manage all the potential impacts identified in the report. EMP is a practical tool for the implementation of mitigation and protective measures identified in

the EIA. The plan relates anticipated project activities to sensitive environmental factors, outlining policies and procedures for the protection of the environment. The outcome will minimize the risk of costly, time-consuming environmental issues, while maximizing productivity, bottom-line performance and goodwill. Daiken FPMU LPF/0003 get approval EMP on [18th September 2019(18) NREB/6-3/2G/24].

12.3 Environmental Compliance Audit (ECA)

An environmental compliance audit is an independent evaluation of a company's environmental legal requirements and an assessment of how the company complies with those requirements. Based on natural resources and environmental audit rules 2008. The ECA was carried out within the requirements of Environmental Audit in the Natural Resources and Environment (NRE) Rules 2008 and also reflect the requirements and guidance provided relating to audit practice such as Natural Resources and Environmental Ordinance 1993 (Cap. 84, Laws of Sarawak in Edition 1958) and Natural Resources and Environment (Prescribed Activities) Order, 1994. Two (2) Internal Compliance Audit will be conducted by company Internal Auditor (Competent Person) and One (1) External Compliance Audit will be conducted by External Auditor engage by NREB. NREB will carry out monitoring and inspection for site visit yearly.

12.4 Patrolling

DSK has been develop patrolling schedule to ensure the protected and HCV areas is remains intact, control encroachment, fire monitoring and to prevent/control unauthorized activities in forest plantation areas both on the ground method and using UAV.

13. IDENTIFICATION AND PROTECTION OF RARE, THREATENED AND ENDANGERED SPECIES

The guidelines used for identification and protection of ERT species of forest flora and fauna including features of special of special biological interest area:

- a) Wildlife Protection Ordinance 1998
- b) HCVF Toolkit for Malaysia
- c) Sarawak Plant Red List
- d) A Master Plan for Wildlife in Sarawak 1996

14. High Conservation Value Forest (HCVF)

High conservation value forest used to describe those forests who meet criteria defined by the forest management designation. HCVF also defined as having the biological, ecological, social or cultural value of outstanding significance. Specifically, high conservation value forest is those that possess one or more of the following attributes:

HCVF Code	Description
1	Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels. (present)
2	Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance. (not present)
3	Rare, threatened, or endangered ecosystems, habitats and refugia. (not present)
4	Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes. (present)
5	Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous people (for livelihoods, health, nutrition, water, etc...), identified through engagement with these communities or indigenous peoples. (not present)
6	Sites, resources, habitats and landscapes of global or national cultural, archeological or historical significance, and/or of critical cultural, ecological, economic or religious/ sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples. (present)

Table 1.4: HCVF Code

14.1 Composition and Observed Changes In The Flora and Fauna

Some small mammals are still sighted such as squirrels and tree shrews, including some birds such as cattle egret, collared kingfisher, and spotted dove. As per the interview session with plantation forest managers, workers and local communities, these are the wildlife that have been sighted within the area – wild boar (*Sus barbatus*), Sambar deer (*Rusa unicolor*), long-tailed macaque (*Macaca fascicularis*), pig-tailed macaque (*Macaca nemestrina*), porcupine (*Hystrix brachyura*), king cobra (*Ophiophagus hannah*), and monitor lizard (*Varanus salvator*). Table below give the list of wildlife sighted (by workers, local communities, and during survey) within the area and their conservation status based on Wild Life Protection Ordinance 1998 and International Union for Conservation of Nature (IUCN).

No.	Family	Common name	Scientific name	WPO 1998	IUCN
1	Cercopithecidae	Long-tailed macaque	<i>Macaca fascicularis</i>	Protected	Endangered
2	Cercopithecidae	Pig-tailed macaque	<i>Macaca nemestrina</i>	Protected	Endangered
3	Suidae	Wild boar	<i>Sus barbatus</i>	-	Vulnerable
4	Cervidae	Sambar deer	<i>Rusa unicolor</i>	-	Vulnerable
5	Elapidae	King cobra	<i>Ophiophagus hannah</i>	Protected	Vulnerable
6	Hystricidae	Porcupine	<i>Hystrix brachyura</i>	Protected	Least Concern
7	Varanidae	Monitor lizard	<i>Varanus salvator</i>	Protected	Least Concern
8	Pythonidae	Bornean Python	<i>Python breitensteini</i>	Protected	Least Concern
9	Sciuridae	Squirrel	<i>Callosciurus spp.</i>	Protected	Least Concern
10	Tupaiaidae	Treeshrew	<i>Tupaia spp.</i>	Protected	Least Concern
11	Ardeidae	Cattle egret	<i>Bubulcus ibis</i>	Protected	Least Concern
12	Columbidae	Spotted dove	<i>Spilopelia chinensis</i>	-	Least Concern
13	Alcedinidae	Collared kingfisher	<i>Todiramphus chloris</i>	Protected	Least Concern

Table 1.5: List of sighted wildlife within the plantation area with their legal protection

15. HARVESTING OPERATION

15.1 Harvesting System Selection

The harvesting system used in Daiken FPMU will be ground-based harvesting system which involved the use of alpine grapple yarder used for pulling logs from the woods to a logging road with cables. Yarding is the primary harvesting system to be used at Daiken FPMU is cable. As well as being economically more efficient the use of this system also helps to protect the fragile soils and in particular reduce erosion and compaction. Avoidance of the latter effect is of particular importance when replanting. This a cable system that enable partial or full suspension of felled trees when yarded to a landing for partial processing. Economics demands that extraction of trees harvested near the roadsides and in areas not suitable for shovel yarding must be ground based. Site damage will be limited by the use of shovel mounted grapples.

Other benefits of a yarding system include:

- reduced disturbance to soils on steep erodible sites;
- reduced compaction when compared to a ground-based system;
- it can be used from high vantage points minimising construction of new road infrastructure (this helps maintains water quality and minimises site disturbance); and
- it allows access to otherwise economically inaccessible areas. Full use is made of the existing roads and skid trails and little new roading is required other than short extensions of some access spur roads necessary for efficient harvesting.

16. ENVIRONMENTAL AND SOCIAL IMPACTS OF HARVESTING AND OTHER OPERATION

16.1 Environmental Impacts

Environmental Impact Assessment (EIA) is important to identify and evaluate the environmental consequence from the harvesting and planting program conducted within the FMU. It covers a wide scope and criteria such as buffer zone, water pollution, social or ecology effect. The environmental impacts assessment matrix is used to identify and depict the potential environmental impacts that may occur during the various stages of development. The nature of the environmental impact is categorized into seven (7) classes in accordance with the NREB's (1995) guidelines. They are:

- 1 - Minor adverse environmental impact
- 2 - Moderate environmental impact
- 3 - Major adverse impact
- A - Minor positive impact
- B - Major positive impact
- U - Potentially adverse, but insufficient information
- N - Insignificant impact

16.1.1 Environmental Impact Assessment Metric

Possible Types of Impacts			PROJECT ACTIVITIES									
			Preliminary		Land Preparation			Field Establishment		Maintenance & harvesting		
1 - Minor Adverse Impact 2 - Moderate Adverse Impact 3 - Major Adverse Impact N - Non-significant impact A - Minor Positive Impact B - Major Positive Impact U - Potentially Adverse, but insufficient information			Site investigation	Clearing of vegetation	Stacking of green wastes	Burning (if practised)	Lining & holing	Field planting	Manual weeding & pruning	Pest & disease control	Felling/Harvesting	Abandonment
			Environmental Components	Soil	Surface Erosion	N	3	1/B	N	N	N/B	N
Landslip & Slope Stability	N	1			N	N	N	N/B	N	N	1	N
Soil Compaction	N	2			1	N	N	N	N	N	1	N
Soil Fertility	N	N			A	N	N	A	N	N	N	N
Hydrology	Water Yield	N		1	N	N	N	N	N	N	1	N
	Dry Season Flow	N		1	N	N	N	N	N	N	1	N
	Stormflow/Flood Response	N		2	N	N	N	A	N	N	2	N
Drainage	Sediment Load/Turbidity	N		3	N	N	N	N/B	N	N	3	N
	Chemical Quality	N		1	N	N	N	N	N	2	1	N
	Biological Quality	N		N	N	N	N	N	N	2	N	N
Ground Water	Water Table Recharge	N		1	N	N	N	N	N	N	1	N
	Groundwater Quality	N		N	N	N	N	N	N	1	N	N
	Aquifer Characteristics	N		N	N	N	N	N	N	N	N	N
	Existing Uses	N		N	N	N	N	N	N	N	N	N
Atmosphere	Local Climate	N		1	N	1	N	A	N	N	1	N
	Regional Climate	N		N	N	N	N	N	N	N	N	N
	Air Pollution (Dust, Smoke etc.)	N		1	N	3	N	N	N	1	1	N
Land Use	Adjacent Land Use	N		N	N	N	N	N	N	N	N	N
	Downstream Land Uses	N		N	N	N	N	N	N	N	N	N
	Vegetation	N		1	A	N	N	A	A	N	3	B
Species and Population	Birds	N		1	A	2	N	A	N	2	3	B
	Mammals	N		1	A	2	N	A	A	2	3	A
	Reptiles/Amphibians	N		1	B	2	N	A	A	2	3	A
	Invertebrates	N		1	B	2	N	A	A	2	2	A
	Fish	N		1	N	N	N	N	A	2	3	A
	Other Aquatic Life	N		1	N	N	N	N	A	2	3	A
Human and Socio-Economics	Domestic Water Supply	N		3	N	N	N	N	N	N	3	N
	Workers' Safety/Public Health	N		3	1	3	N	N	1	1	3	N
	Employment/Business	A		A	A	A	A	A	B	B	B	3
	Cultural, Historic Site	N		N	N	N	N	N	N	N	N	N

Table 1.6: Environmental Impact Assessment Metric

16.1.2 Social Impacts Assessment

Social Impact Assessment (SIA) is a key component for plantation management in recognizing its operations impact towards its stakeholders, namely workers, contractors, suppliers, local surrounding community, local government, and private bodies. By “social impacts”, we mean the consequences that affect the ways, in which they live, work, play, relate to one another, organize to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalize their cognition of themselves and their society.

17. BUDGETARY

Annual budget includes the expenses of overall operations and activities namely; Overhead costs include admin, human resources, CSR, Protection, Land Preparation, Planting & Supply, Silviculture including social program, Amenities for workers, Safety, Staff training, research development etc.

18. CERTIFICATION STATUS

At the time of preparing this Public Summary the area of Daiken FPMU (LPF/0003) designated for tree plantation. The area designated for ITP had yet to be certified under any certification scheme. The intention is to certify those ITP areas which are eligible under MTCS. It is planned that PEFC will conduct Stage 1 of the audit in February 2023. Second stage of audit planning will conduct on December 2023.