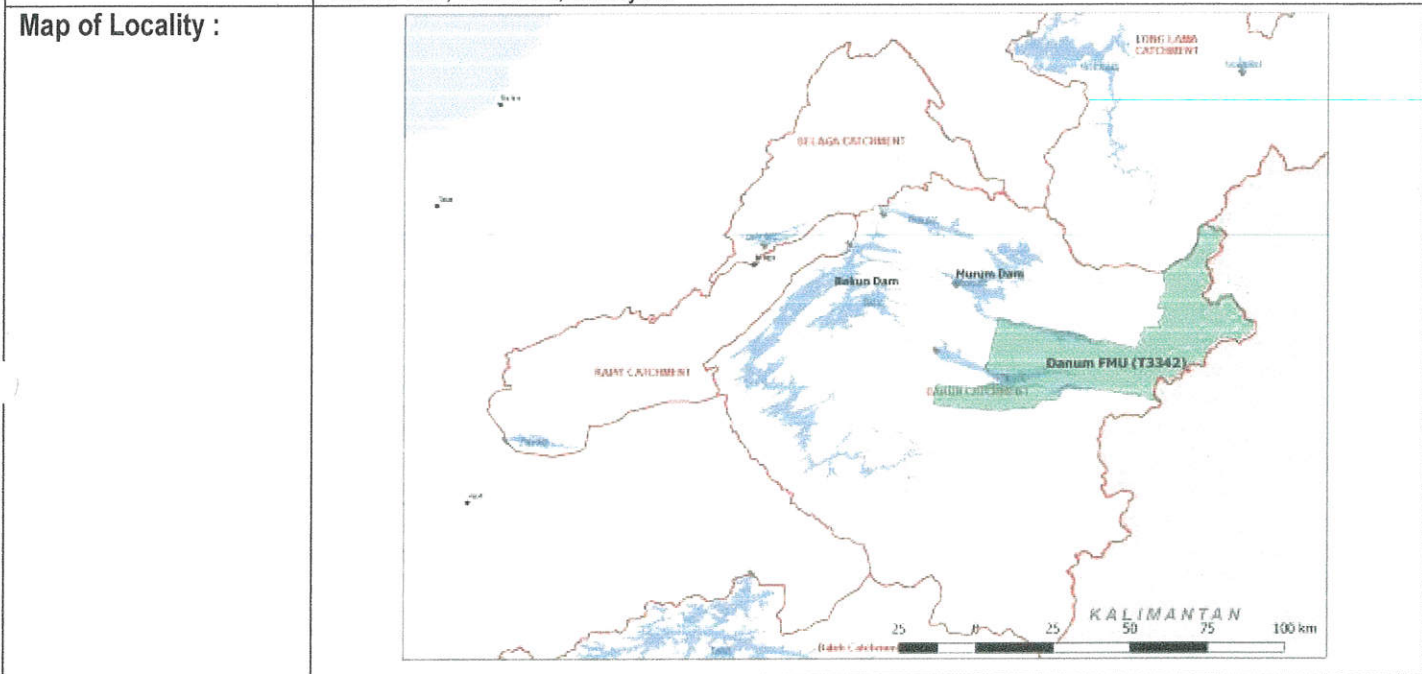


Shin Yang Industries (Btu) Sdn Bhd
Danum Forest Management Unit (T-3342)
Public Summary
Website: www.shinyang.com.my

Document Date: 10 th April, 2019	Name Of FMU: Danum FMU T-3342	Person In Charge: Mr Andy Wong Ko Hock, Forest Manager & SY FMC Advisor
---	---	--

Address : Lot 515, Jln. Datuk Edward Jeli, Piasau Industrial Estate, P.O.Box 1599, 98008 Miri, Sarawak , 98008 Miri, Sarawak, Malaysia



(I) Background Danum FMU T3342 is located at upper Sg. Murum area in Kapit Division, the License (FTL) No. T/3342 was issued to Shin Yang Industries (Bintulu) Sdn Bhd for a period of 25 years (17/6/1997 to 16/6/2022) and the forest management is undertaken by Shin Yang Sdn. Bhd sustainable forest management (SFM) committee. It was previously being logged one cycle of harvesting. However , with the recent approved FMP, the operable area is divided into **30 coupes** lately, occupies approximately total coupes area of **200, 383** ha(s) of forest land. Some portion of North West part in the Danum FMU area has been inundated due to the impoundment of Murum Dam in September 2013.

(II) Physical Features The altitudes of Danum FMU range from 380m (at low hill areas) to 2,000m (highest spot at the northeastern tip) above sea level. Danum FMU is mainly made up of undulating to fairly steep terrain of 5° to 35° (Terrain Classes II and III) only few areas have steep dissected terrain with slopes exceeding 35° (Terrain Class IV) which is considered too steep for conventional tractor based-logging. The region has a tropical type of climate affected by the monsoon seasons. The climate is generally hot, wet and humid throughout the year. Based on the rainfall stations at Long Lidam and Long Laku, the mean annual rainfall around the Danum FMU is ranging from 3,647 to 3,714mm.

(III) Boundaries The Danum FMU T-3342 area with total perimeter boundaries of 396 km bounded by,
 a. Sg. Danum, cut-lines and tributaries of Sg. Danum and sg. Plieran to the north ;
 b. The Malaysia/ Indonesia International Boundary to the east
 c. Sg. Bungau, Sg. Kajang and cut-lines to the South ; and
 d. Cut-lines on the west .

(IV) Related to HoBs Danum FMU T-3342 is partially located within the region of which is one of the portion area of the proposed HoB which is, part of Danum Protected Forest , part of Linau Protected Forest &

**Shin Yang Industries (Btu) Sdn Bnd
Danum Forest Management Unit (T-3342)**

Public Summary

Website: www.shinyang.com.my

Document Date:
10th April ,2019

Name Of FMU:
Danum FMU T-3342

Person In Charge:
Mr Andy Wong Ko Hock,
Forest Manager & SY FMC Advisor

Part of Balui Protected Forests. The coverage area by respective PFEs within the Danum FMU are as below,

Protected Forest (PF)	Total of Area (ha) in Danum FMU	Est. Coverage within HoB , ha(s) & (%)
Balui PF	28,441	- (Nil)
Linau PF	117,547	72,238.4 (61%)
Danum PF	54,395	54,394.3 (100%)
Total Area	200,383	126,632.7 (63%)

In connection to HoB, 63% of the total area of Danum FMU T-3342 are located within the HoB area and the type of forest are Mixed- Dipterocarp Forest. Hence, the management of Danum FMU is to ensure to have a proper FMP to ensure the integrity of the forest values within the Protected Forest are being maintained.

**(V) Forest Condition
Function Zoning**

- a. Protected zone
 1. The protection is more related to the HCVs/ HC VF attributes ;
 2. Area of over 35° slope (Terrain IV) ;
 3. Watershed protection or the conservation of plant and wildlife habitat will be designated as protected zone;
 4. Water catchment at coupe 5AR ;
 5. 1 km International Boundaries Buffer Zone at south east part;
 6. 4 Salt Licks and 1 nesting areas ;
 7. Shifting Algriculture & cultural sites of 2 Communities, Long Lidem & Long Tanyit;
 8. The protection area within summed up as 19,002 ha which covered 9.48% of the Danum FMU area.
- b. Production area
 1. The estimate area permitted to uses for timber production is approximately 152,605 ha (76.15% of the total area).
- c. Community Area
 1. FMU is free from any gazette NCR lands;
 2. Through the consultation with the communities, about 895 ha(s) of the land along Sg. Linau and Sg. Kajang, within Coupe 5AR and 25AR are utilized by the local communities which has been preserved for shifting cultivation (SA), this area will be preserved for extraction of fire woods and non-timber forest product (e.g. rattan lentik, rattan segak & bamboo, etc) for own use and hunting for food dependence; and
 3. There are 3 burials ground within the Danum FMU which belong to Long Lidem, Long Tanyit and Long Kajang. For people from Long Abit, their burial ground was located at the downstream of Sg. Linau, while for Long Lidem is located about 1km upstream of Sg. Kajang from the longhouse. **[MC&I 8.2 e]**

**(VI) Management
Objectives**

- a. Danum FMU T-3342 is to have a multiple-use forest for economic, social and environmental purposes, while ensuring that the productive capacity of the forests for both goods and services is maintained and/or enhanced;
- b. To sustain production and revenue of high value timber based on an annual allowable cut;

A

Shin Yang Industries (Btu) Sdn Bnd
Danum Forest Management Unit (T-3342)
Public Summary
Website: www.shinyang.com.my

Document Date:
10th April ,2019

Name Of FMU:
Danum FMU T-3342

Person In Charge:
Mr Andy Wong Ko Hock,
Forest Manager & SY FMC Advisor

- c. To monitor the growth through Continuous Forest Inventory (CFI) and ensure rate of harvest shall not greater than estimated regrowth of the residual stand;
- d. To ensure the actual harvesting area is not more then the Annual Harvesting Coupe or Annual Cutting Area (ACA) as calculated based on Net Harvestable Production Area divided by Cutting Cycle (ha/ yr.)= **6,098** ha;
- e. To carry out appropriate treatment during the plan period, in areas where potential commercial species are present for the purpose of regeneration and enhancement of their growth performance to ensure sustainability in future cycle;
- f. To ensure available of DF circular 6/99 and should be strictly complied;
- g. To adhere strictly to Reduce Impact Logging during harvesting ;
- h. To protect areas of scenic, historic, geological or ecological significance through the establishment of HC VF demarcation at the FMU that will be remained undisturbed/ buffered;
- i. Evaluation to the impacts of harvesting activities to the stakeholders e.g. workers and local community within the FMU area through comprehensive SIA;
- j. To provide a safety environment to the staffs as well as their family ; &
- k. To respect the right of the local community and workers;

(VII) Forest Resources & Forest Research

- a. FMU is **hill mixed-Dipterocarp forest (MDF)**, it consists trees of the family Dipterocarpaceae, an important source of timber e.g. Meranti (Shorea spp.), Selangan Batu (Shorea spp.), Keruing (Dipterocarpus spp.), Kapur (Dryobalanops spp.) and Mersawa (Anisoptera spp.) in sparse clusters, dominate at the upper storey of the forest. Meanwhile, mid-storey dominated by small species such as Asam (Magifera spp.), Bintangor Putih (Calophyllum spp.), Geronggang (Cratoxylum spp.), Nyatoh (Ganual & Isonandra spp.) and Ubah (Eugenia spp.). Dense thickets of small trees and regeneration or larger species thickly dominate the lower storey;
- b. Ensurai (Dipterocarpus oblongifolius) is the only **Totally Protected Plants**;
- c. There are twelve (12) Protected Plants categorized as Critically Endangered (CR), Endangered (EN) or Vulnerable (VU) in the IUCN Red List of Threatened Species global, Sarawak Plant Red List and other published sources;
- d. Timber stock as recorded from the forest research (30cm dbh and above) is averaged at **104.47m³/ha** with 30cm- 40cm (56.2%), 41cm -60cm (35.6%) and 60 cm above (8.2%). **[MC&I 8.2a]**
- e. Non-timber product such as rattan, bamboo, palm and wild vegetable and fruits are still available at the FMU and
- f. FMU has the Total of ERT species of fauna with 114 species of fauna consist of 19 mammals, 90 aves, four (4) reptiles and one (1) insect **[MC&I 8.2b]**

(VIII) Yield Regulation

- a. The diameter-limit cutting are **≥ 50 cm dbh and above for Dipterocarp species AND ≥ 45cm for non-Dipterocarp species** and to ensure that all species listed as Totally Protected under the Wild Life Protection Ordinance 1998 would not be felled;
- b. The Danum FMU involves the selective, re-entry timber harvesting of all hill forest in accordance with the term and conditions of the FTL No. T-3342 issued by FDS;
- c. The area will be worked over a period of **30 years** in one cutting cycle;
- d. Coupe Sequences justification of forest research , forest manager has elected the South West part of the Danum FMU to be the initial coupe of this cutting cycle and the cutting sequence will gradually move to the middle part of the FMU and lastly to the eastern part.

^

**Shin Yang Industries (Btu) Sdn Bnd
Danum Forest Management Unit (T-3342)**

Public Summary

Website: www.shinyang.com.my

<p>Document Date: 10th April ,2019</p>	<p>Name Of FMU: Danum FMU T-3342</p>	<p>Person In Charge: Mr Andy Wong Ko Hock, Forest Manager & SY FMC Advisor</p>
<p>(IX) Rate of Annual Harvest</p>	<p>a. The average of harvestable yields within the research psp is 51.87 m³ha⁻¹, derived from high density and low density of productivity areas (fair representative of PSPs)</p> <p>b. Economy cut is initially set at 22.0 m³ha⁻¹ is , then it will be initially set as net volumes for verifying the AAC;</p> <p>c. Allowable Cutting Area (ACA) in ha(s) = 6,098 ha; AND</p> <p>d. Annual Allowable Cut is 98,780 m³ of production limit for the initial planning of this FMP .</p>	
<p>(X) Harvesting Techniques</p>	<p>a. The Danum FMU involves the selective cutting, re-entry timber harvesting of all hill forest in accordance with the term and conditions of the FTL No. T/3342;</p> <p>b. 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;</p> <p>c. The well-planned and constructed road network will enable forest harvesting operation in Danum FMU area to be carried out in a proper and economical way during the whole duration of the licence and results in long term economic benefits for the licensee.</p> <p>d. The RILs systems adopted by FMU practicing the Reduced impact logging (RIL) which involves pre-harvesting, harvesting and post harvesting planning and related activities.</p> <p>e. 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.</p>	
<p>(XI) Forest Growth</p>	<p>a. The FMU adopted into the monitoring forest growth on ;</p> <p>b. Individual tree increment or growth in terms of volumes / basal (Is) ;</p> <p>c. Mortality (M) , or the death of trees ; a</p> <p>d. Ingrowth I, or the appearance of new trees in measurable size classes from regeneration; and</p> <p>e. Simulation module adopted by FMU is I = Is - M + R .</p> <p>f. Average Basal Area for the 1st Assessment for 15 research plots is 12.897 m²ha⁻¹ .</p> <p>g. For the 1st FMP, MAI is defined base on the literature study and the FMU will continue monitor growth with interval 5 years during the revise of the FMP.</p>	
<p>(XII) Environmental Assessment & Quality Monitoring</p>	<p>a. The EIA of Danum FMU (T-3342) under terms and approval condition of approval in accordance with the provisions of Natural Resources and Environment Ordinance 1993(Cap.84- Laws of Sarawak) and Natural Resources & Environment (Prescribed Activities) Order, 1994, has been approved by the controller of Environment Quality Sarawak (EQS) on 3rd December , 2015;</p> <p>b. The FMU is conducting quarterly Environmental Monitoring Report (EMR) to monitor the status of General Terms & Conditions and mitigations as required in the approved EIA report; and EQM of Danum FMU is corporate into quarterly EMR ;</p> <ol style="list-style-type: none"> 1. To establish environmental baseline and trend; 2. To inform policy design and decision making and 3. To ensure compliance with environmental regulation. <p>c. The environmental baseline of water quality of Danum FMU is Compliance Limits are benchmarked at Class IIB of the National Water Quality Standards of Malaysia (NWQSM). [MC&I 8.2c]</p>	

A

**Shin Yang Industries (Btu) Sdn Bnd
Danum Forest Management Unit (T-3342)
Public Summary**

Website: www.shinyang.com.my

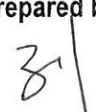
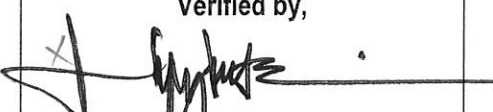
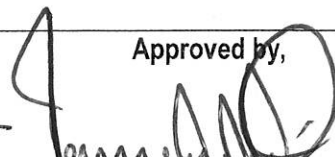
Document Date: 10 th April ,2019	Name Of FMU: Danum FMU T-3342	Person In Charge: Mr Andy Wong Ko Hock, Forest Manager & SY FMC Advisor
(XIII) High Conservation Value(s)	<p>a. Six major (6) values listed in the HCVF Malaysia Toolkit (2009) are present in FMU. A significant number of HCV biodiversity species are present in the study area and its surroundings.</p> <p>b. There were also signs of critically endangered (CR), endangered (EN), vulnerable (VU) and nearly threatened (NT) flora and fauna (HCV 1.2) observed during the assessment. A total of 114 fauna and 18 flora species were found to be an ERT species.</p> <p>c. There are 10 endemic fauna and 66 flora species found in the study sites (HCV 1.3).</p> <p>d. Areas for critical temporal use were also identified to be present (HCV 1.4).</p> <p>e. The area is an important linkage between other larger forest landscape complexes as it is surrounded by other logging concession, Totally Protected Areas and Forest Management Unit (HCV 2).</p> <p>f. Part of the FMU was inundated due to the impoundment of Murum dam, as a result the FMU become an important refuge which provide food source for wildlife in vicinity of the FMU(HCV 3).</p> <p>g. The landscape of Danum FMU consist of undulating and steep areas that classified as Terrain Class IV (HCV 4.1).</p> <p>h. River buffer prohibiting logging operations is required for service of nature (HCV 4.2), and the size of the buffer depends on the size of the river or stream, in order to control soil erosion.</p> <p>i. Furthermore, the entire FMU is within HoB initiatives site, which linking the TPA networks between Sarawak, Sabah and trans boundary networks in Brunei and Kalimantan (HCV 4.3).</p> <p>j. Result of the assessment for social and cultural values suggested HCV 5 is present as the communities within or adjacent to the FMU depend on hunting, fishing and collecting jungle produce.</p> <p>k. HCV 6 is present as three (3) burial grounds found within the Danum FMU.</p> <p>l. Patrolling and monitoring on the HCV will be conducted in the interval once a year by the monitoring crew through the designed internal audit to check the boundary & encroachment AND also the wildlife monitoring through Camera Trap and Transect trails monitoring.</p> <p>[MC&I 9.3.2]</p>	
(XIV) Protection of Rare , Threatened and Endangered Species.	<p>a. FMU will continual monitor and observe changes in Flora and Fauna ,especially ERT Species by;</p> <ol style="list-style-type: none"> 1. Internally appointed 10 rangers in periodical patrolling the FMUs area; 2. The DF Circular 6/99 should be strictly complying with especially on hunting activity in the license area. Workers and adjacent communities are to be informed of this policy; 3. New wildlife posters (Color copy) and written instruction from the Managing Director on the 'No hunting' policies should be made available on site; 4. 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; 5. 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; 6. 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; and 7. Appoint the Honorary Wildlife Ranger to monitor the Wildlife Conservation works. 	

**Shin Yang Industries (Btu) Sdn Bnd
Danum Forest Management Unit (T-3342)
Public Summary**

Website: www.shinyang.com.my

Document Date: 10 th April ,2019	Name Of FMU: Danum FMU T-3342	Person In Charge: Mr Andy Wong Ko Hock, Forest Manager & SY FMC Advisor
(XV) Socio Economic Conditions	<p>a. Settlements identified within and in the vicinity of the FMU are Long Tanyit, Long Lidem and Long Kajang was located inside the FMU, while the Long Abit is located outside the FMU area;</p> <p>b. The main communities living here are Penan and Punan encompass a total of 115 doors with a population of 587 people, averaging 5 persons per door;</p> <p>c. A "Sustainable Forest Management Liaison Committee" has been established with numbers consisting of FMU ;</p> <p>d. Local community as a "Corporate Social Responsibility network" to resolve issues affecting individual longhouse and the regional landscape; and</p> <p>e. There is no legal case filed by any local community against FMU.</p>	
(XVI) Safety & Health	<p>a. As forestry work even within a single FMU especially the physical features of mountain forest is widely scattered with frequent changing work sites. The FMU's supervision and control of forest workers at the FMU sites are highly enforced by FMU management team to ensure occupation safety demand great effort by all levels of management and self-reliance of the workers.</p> <p>b. The FMU has committed to ensure safety at working place through the safety policy written and signed by the General Manager on 14/03/2017. 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</p>	
(XVII) Social Impact Assessment	<p>The SIA has covered introduction of affected communities or organization mentioned further in introduction, the identification of social impacts of affected communities/organization, proposed mitigation and enhancement measures and monitoring process to ensure the FMU is earning benefits while having the continuous relationship with the communities within the FMP. Additionally, monitoring and enhancement measures will be done twice a year by collaboration of SYSB SIA practitioner monitoring members and SYSB surveyor team. As for the conclusion part of SIA, the overall satisfaction of the communities to the FMU is fair. However, the FMU has to continuous monitoring the satisfaction of the communities through the compliance monitoring and parameter monitoring [MC&I 8.2b].</p>	
(XVIII) Budget Allocation	<p>In order to achieve the forest management certification, the management of Danum FMU has planned and allocated total operations cost amounting RM 385,321,000 (estimation) for the Forest Management Certification for the period 2018 -2027 (10 years planning). [MC & I 8.2 d]</p>	
(XIX) Publish Website	<p>http://www.shinyang.com.my</p>	

END OF SUMMARY FOR DANUM FMU T-3342

Prepared by, 	Verified by, 	Approved by, 
Mr. Lau Keiw Hieng (Assistant Certification In Charge) Date :10/4/2019	Mr. Andy Wong Ko Hock (General Manager) Date:10/4/2019	Mr. Mr. James Ling Lu Kiong (Group Managing Director) Date:11/4/2019