

Ulu Kalumpang-Wullersdorf Sustainable Forest Management Project

Forest Conservation Management Plan (FCMP) of Ulu Kalumpang-Wullersdorf SFM Project

The Forest Conservation Management Plan (FCMP) of Ulu Kalumpang-Wullersdorf SFM Project (UKWSFM) was prepared by an appointed consultant for the period 2010 until 2011. The FCMP sets out in practical terms how the forest conservation objectives of the UKWSFM Project will be achieved given the current state of the Ulu Kalumpang-Wullersdorf project areas and relevant knowledge. It is a guiding document for the preparation and evaluation of annual management budgets and activities planned within the operation year. It also serves as a reference document for parties involved in the administration and management of the Ulu Kalumpang-Wullersdorf project areas. It lists important information, reports and administrative arrangements and shall be updated and improved annually to reflect changes in the UKWSFM Project and advances in relevant knowledge.

Annexation of a Part of Madai Baturong Forest Reserve (Binuang) to Ulu Kalumpang-Wullersdorf SFM Project Area

It was stated in the Forest Conservation Management Plan (FCMP-1st Jan, 2011 to 31st Dec, 2020) of Ulu Kalumpang-Wullersdorf SFM Project that part of the Madai Baturong Forest Reserve VJR107F (Binuang) will be part of the project area. This FR, situated at the northern part of Ulu Kalumpang FR, is separated by a narrow strip of private land. The reason to bring this FR under this project is to establish the biodiversity connectivity between these reserves, particularly in maintaining the wildlife corridor connectivity in order to secure long term survival of viable wildlife populations, particularly the pygmy elephants and to support watershed management.

This FR was annexed to FMU Ulu Kalumpang to form a larger, FMU Ulu Kalumpang-Mt Wullersdorf, and to be administered by the DFO Kunak. The total area of this project now becomes 64,929.74 hectares, which includes four (04)

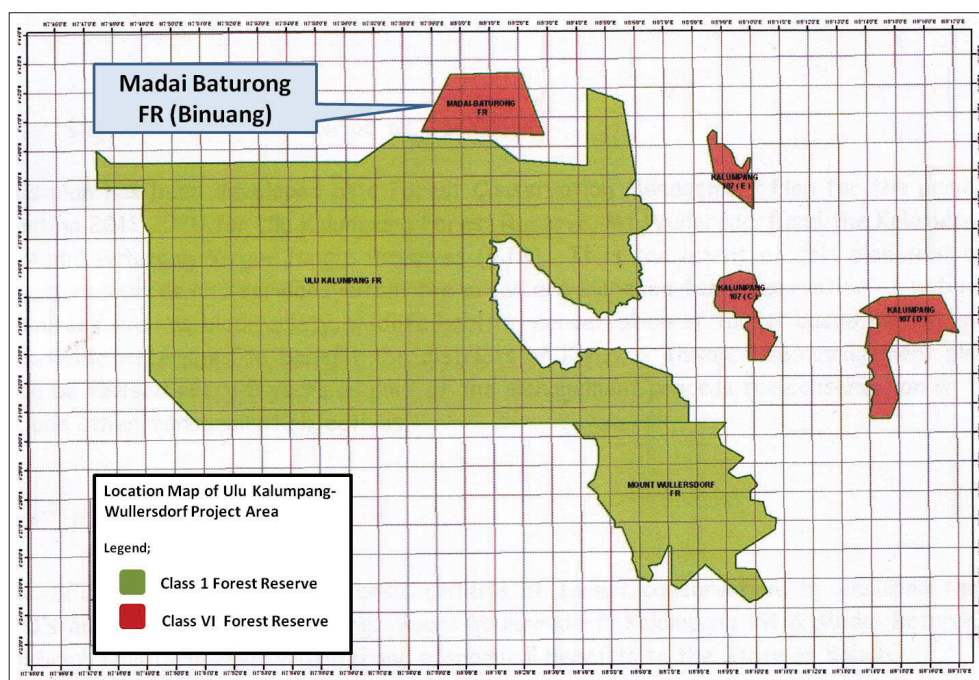
VJR; (i) Kalumpang VJR107C (950 ha), (ii) Kalumpang VJR107D (1,950 ha) and (iii) Kalumpang VJR107E (868 ha) (iv) Part of Madai Baturong VJR107F (2,312.74 ha) and two (02) Class 1 Forest Reserve which are Ulu Kalumpang (50,964 ha) and Mt. Wullersdorf (7,885 ha). The title for this project still remains as “Ulu Kalumpang-Wullersdorf SFM Project”.

Forest Restoration in Ulu Kalumpang-Wullersdorf (UKW) SFM Project

The need to repair the habitat and restore forest structure and function is recognized as a component of sustainable forest management. Forest restoration is a complex task, complicated by diverse ecological and social conditions, that challenge our understanding of forest ecosystems. The term restoration is used indiscriminately and it is difficult to define in a way that encompasses all situations found in the literature and in practice. Generally, restoration is seen as symmetric with degradation: an undisturbed forest in a natural or historical condition can be degraded, and a degraded forest can be restored to that natural or historical condition.

In the UKWSFM area, the reserve areas were heavily encroached with oil palm planting activities. This famous agricultural activity could generate better income to the planters that led to individuals and big companies to encroach the reserves. The department took proper planning in order to face this problem supported by the good governance of the Sabah Government. Since 2008, the department had destroyed almost 3,500 hectares of illegally planted oil palm which were planted within the reserves.

Since then, the degraded area is being restored through a well planned restoration programme carried out to repair the mistake and to make the forest ecosystem viable. Since 2008 until 2011, we managed to restore 972 hectares of selected restoration areas with selected and suitable tree species. The remaining area will be soon restored along the Tenth Malaysia Plan (2011-2015) and would be continued in the next Malaysian Development Plan.



New Map for the Project Area (Ulu Kalumpang-Wullersdorf SFM Project).

Forest Restoration in Sg. Mantri (Southeast of Ulu Kalumpang FR)

The work to restore the encroached forest area was temporarily stopped since 2010. This was instructed by the management of SFD in order to concentrate fully on the implementation of maintenance of planted seedlings. The awarded contractor; Syarikat Pertanian Kondowoi Pemborong Am, was given full responsibility to implement the maintenance of approximately 350 hectares of planted area. But in 2011, only 180 hectares

within the selective planting blocks, were maintained. A total of 8 sample plots were established within the 8 planting blocks. The average height and diameter of trees were enumerated within the 100m x 100m (1 ha) sample plots. The data could help in estimating the mortality rates of the planted seedlings. Based on the data obtained from the stand enumeration, the overall growth and survival rate of the planted trees in 2008 and 2009 were good, with 34% mortality recorded. The average height and DBH of the planted seedlings were approximately 1.4 meter and 1.3 meter in diameter.



Signage at Sg. Mantri Restoration Area, Ulu Kalumpang Forest Reserve.



Planted Laran trees since 2008 (3 years old).



Planted Kembang Semangkok trees since 2008 (3 years old).



Previously planted with cocoa, now planted with Kapur Paji.



(Left) Sentang and (centre) Seraya Punai trees planted since 2008 and (right) Merbau trees planted since 2008. The growth performance was slow.



(Left) Binuang and (right) Laran trees planted since 2008.



Laran Tree, planted by Datuk Sam Mannan (Director of Forestry); and (right) planted by Tuan Haji Abdul Halim bin Hj. Nayan (Secretary of Natural Resources) during their visit to Sg. Mantri, on 30th March 2009.

Forest Restoration in Sangster (Kalumpang VJR107C - Mt. Forbes & Mt. Sangster)

The illegally planted oil palms within the reserve were destroyed in 2010 with a total area of 300 hectares. Due to limited funding and time constraint, we managed to restore only 22 hectares in 2011 with various fast growing trees, such as Sentang, Ketapang, Angsana, Pulai and also Batai (please refer to Table 25.1).

Table 25.1 : Planted tree species in Cenderamata (Ulu Kalumpang FR) and Sangster (Kalumpang VJR107C) Restoration Area.

Tree Species	Numbers	Area (ha)	Restoration Area
Batai (<i>Paraserianthes falcataria</i>)	29,085	105	Cenderamata - Replanting dead seedlings
Batai (<i>Paraserianthes falcataria</i>)	3,088	15.13	Sangster - Restoration 22 hectares
Angsana (<i>Pterocarpus indicus</i>)	900	4.41	
Pulai (<i>Alstonia</i> spp.)	100	0.49	
Ketapang (<i>Terminalia catappa</i>)	200	0.98	
Sentang (<i>Azadirachta excelsa</i>)	200	0.98	
Total	28,188	107.55	



(L-R) Batai seedlings, one of the fastest growing trees, waiting to be planted at Mt. Sangster; transportation of Batai seedlings to restoration site at Mt. Sangster (Kalumpang Forest Reserve VJR107C); and planted Batai seedlings.

Forest Restoration in Cenderamata Landau (East Ulu Kalumpang Forest Reserve)

The restoration area in Cenderamata Landau was planted with various species since 2010 and was funded under Sabah Development Corridor funds. A local and trained contractor, Ecotend Sdn. Bhd., was appointed to implement the restoration programme. The planned activities for this year was to maintain the planted seedlings within the 600 hectares of restored area. Activities included in the programme were, maintaining the planted seedlings by doing circle weeding and replacing dead saplings and also maintaining the road access within the restoration area. The overall growth and survival rate of the planted trees were not good, with 50% mortality recorded.



(Left) Maintaining the planting line and planted spot; and (right) approved herbicide used to kill the famous and stubborn grass (Rumput Gajah).



Mix planted species with pioneer species in Cenderamata Restoration Area.



Maintaining and repairing the forest roads in Cenderamata restoration area to facilitate the maintenance of planted seedlings activities; and (right) Batai seedlings used for replacing dead seedlings within the planting line.

Permanent Sample Plots

A total of 180 sample plots were established in the Ulu Kalumpang-Wullersdorf project areas that consisted of 77 strip lines and 103 circular plots. The plots were to verify the land use and forest strata within the project areas and also to facilitate long term monitoring of forest growth. The size of the strip line was 100m x 10m (0.1 ha), where all trees above 20cm DBH were measured, enumerated and recorded. As well as circular plots, with 20m in radius (0.126 ha), trees above 15cm DBH were measured, enumerated and marked with numbers, and recorded. Monitoring of the sample plots will be done once in two years.

Table 25.2: Area and percentage of forest stratum for the total project areas.

Stratum	Forest Description	Number of trees ha ⁻¹ ≥ 60 cm DBH	Area (ha)	% of total area
1	Good Forest	16	12,960	19.6
2	Moderate Forest	9-16	14,074	21.3
3	Poor Forest	5-8	28,266	42.8
4	Very Poor Forest	0-4	808	1.2
	Encroached area	NA	9,947	15.1
Total			66,055	

Based on the analysis of data obtained through ground verification, the project areas consisted of 4 strata: Stratum 1-Good Forest, Stratum 2-Moderate Forest, Stratum 3-Poor Forest, Stratum 4-Very Poor Forest as well as encroached areas that were currently planted in oil palm or areas of scrub forest and grasses from previous clearing. Table 25.2 shows the area and percentage of each stratum for the entire project areas.

Clearing of illegal Oil Palm in Mt. Wullersdorf Forest Reserve

The department through the awarded contractor, had targeted to clear 550 hectares of illegally planted oil palm in Mt. Wullersdorf Forest Reserve (400 hectares) and Kalumpang Forest Reserve VJR107D (Sapang), which costs RM1,010,000.00. Due to unexpected circumstances, the project was stopped on a directive from the Director's office. Only 30 hectares of the encroached area within the Mt. Wullersdorf Forest Reserve were destroyed and the remaining area will be continued next year.

Since the beginning of this work in 2008, a total of 3,254 hectares of illegally planted oil palm, cocoa and other crops had been destroyed (refer to Table 25.3). A total of 972 hectares were restored and planted with indigenous and selected tree species. The remaining area will be restored phase by phase, during the Tenth Malaysia Plan (2011-2015).

Table 25.3: Clearing of illegally planted oil palm within the project area.

No.	Hectarage (ha)	Forest Reserve	Contractors	Funded by;
1.	600	Cenderamata Landau, Ulu Kalumpang Forest Reserve	Ecotend Sdn. Bhd.	Sabah Development Corridor
2.	280	Sg. Mantri, Ulu Kalumpang Forest Reserve	Pertanian Kondowoi Pemborong AM	Ninth Malaysia Plan-State Budget
3.	350	Sg. Mantri, Ulu Kalumpang Forest Reserve	Pertanian Kondowoi Pemborong AM	Ninth Malaysia Plan-State Budget
4.	629	Landau and North of Ulu Kalumpang Forest Reserve	Ecotend Sdn. Bhd.	Ninth Malaysia Plan-State Budget
5.	300	Kalumpang Forest Reserve VJR107C (Mt. Forbes & Mt. Sangster)	Hormat Jadi Sdn. Bhd.	Special Fund-Agroforestry
6.	450	Sg. Mantri, Ulu Kalumpang Forest Reserve	Pertanian Kondowoi Pemborong AM	Special Fund-Agroforestry
7.	440	Sg. Mantri, Ulu Kalumpang Forest Reserve	Pertanian Kondowoi Pemborong AM	Ninth Malaysia Plan-State Budget
8.	175	Sg. Mantri, Ulu Kalumpang Forest Reserve	Pertanian Kondowoi Pemborong AM	Ninth Malaysia Plan-State Budget
9.	30	Mt. Wullersdorf Forest Reserve	Pertanian Kondowoi Pemborong AM	Special Fund-Agroforestry

Visitors to Ulu Kalumpang-Wullersdorf SFM Project

On the 11th November, 2011, the Project Operational Committee Chairman, Deputy Director Fidelis Edwin Bajau, came to visit the Cenderamata Restoration Area (Ulu Kalumpang Forest Reserve). He came to inspect the growth of planted trees and the work progress done by the contractor.



Field work visit by Deputy Director (Development) cum Chairman of the UKWSFM project, (centre) looking at the planted area that were maintained by the contractor; and (right) discussion with the contractor representative on the work progress.

Cost Analysis

The actual cost of maintaining all forest management activities of this Project for 2011 was RM 1,335,830.01 (excluding salaries and fuel consumption which were paid by the SFD Headquarters). The approved allocation was RM 1.6 million from the State Government under the Tenth Malaysia Plan, and RM1,010,000 from the Agroforestry Fund (This special fund was specifically for funding the clearing of the illegally planted oil palm within the project area). RM276,870 were returned to the headquarters for the remaining payment for two contractors in 2012.

Table 25.4: Tabulated Expenditure in 2011.

Restoration Program (972 hectares)	RM 358,844.00	Implementation and Supervision of AWP 2011	RM 343,393.93
Forest Protection (Enforcement activities, boundary demarcation, etc.)	RM 188,783.90	Physical Development (Three Forest Checking Stations and Kunak Office, Bridge)	RM 211,325.00
Admin Expenses (Field & Office Equipment)	RM 77,912.38		
Gen Set and Vehicles parts/services and maintenance	RM 107,570.80		
Work on destroying illegally planted oil palms (30 hectares)	RM 48,000.00		
Total Cost			RM 1,335,830.01

Note : Diesel, petrol and salaries are not funded under the allocated amount for this project. The expenses were under SFD headquarters.

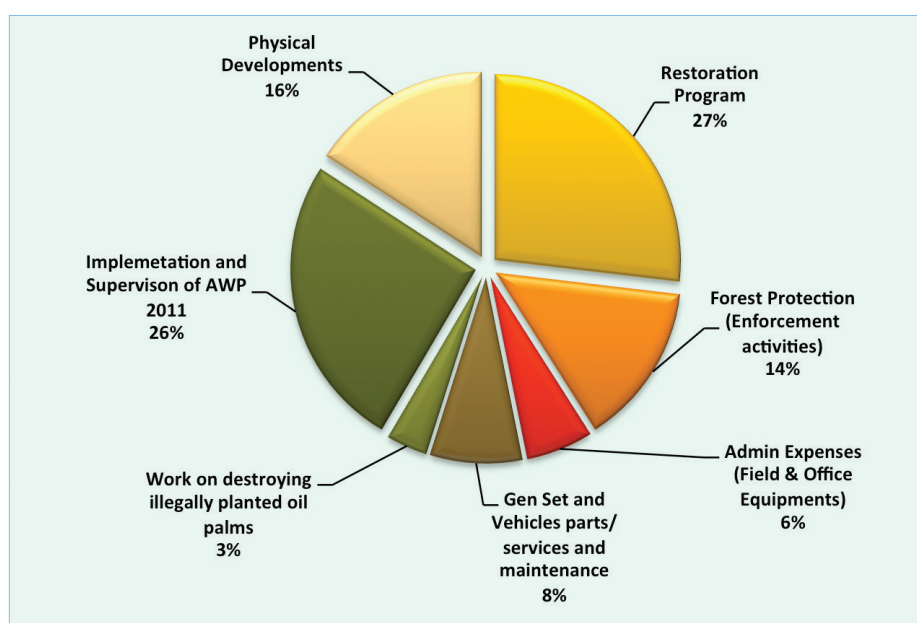


Chart Expenditure in 2011.

What was achieved in 2011?

The table below shows the summarized achievements of all activities for this project in 2011.

Table 25.5: Achievements in 2011.

No.	Activities	Achievements
Forest Operations		
1.	Air surveillance	1 time (4 hours) Many scheduled flights were postponed due to bad weather condition
2.	Forest offences	1. Installation of forest reserve signboards at selected boundary of Mt. Wullersdorf Forest Reserve. 2. Destroyed 18 illegal structures within Landau area. 3. Ground patrol at the project area. 4. 247 bar logs seized from Mt. Wullersdorf FR. 5. Destroyed 198 bar logs found at Ulu Kalumpang FR.
3.	Road maintenance	Maintenance and construction of connecting road within planted area in Cenderamata Landau
4.	Establishment of Permanent Sample Plot (1 ha)	1. Three (3) units of plots were established within restoration area in Cenderamata Landau. The average of mortality rate recorded was 30-35%. 2. Eight (8) units of plots were established within restoration area in Sungai Mantri. The average of mortality rate recorded was 34%.
Forest Restoration		
1.	Encroachment Areas (Sg. Mantri, Ulu Kalumpang Forest Reserve) - Planted area for 2008 and 2009	110 hectares area (selective planting blocks) circle weeding.
2.	Encroachment Area (Cenderamata Landau, Ulu Kalumpang Forest Reserve) - Cenderamata Landau Area	1. First Round Maintenance (Circle weeding + fertilizer application) for 215.9 hectares (Total area 600 hectares). 2. Work continued until October 2012.
3.	Encroachment Area [Kalumpang Forest Reserve VJR107C (Mt. Forbes & Mt. Sangster)] - Sangster Area	Restored 22 hectares with various fast growing tree species, such as Batai (<i>Albizia falcataria</i>).
4.	Encroachment Area (Mt. Wullersdorf Forest Reserve) - Kawasan Teck Seng	1. Clearing of illegal planted oil palms within the area of 550 hectares (Mt. Wullersdorf + Kalumpang VJR107D). 2. Only 30 hectares destroyed and the remaining areas will be destroyed in 2012. This project was funded by Agroforestry Fund.
Boundary Demarcation And Maintenance		
1.	Kalumpang Forest Reserve VJR107D (Sapang)	Surveyed by the awarded contractor. Work continued until the end of 2012.
2.	Mt. Wullersdorf Forest Reserve	Maintenance of the boundary at the selective area which was encroached with oil palms.
Expenditure		
1.	Vot D11 025 Ulu Kalumpang-Wullersdorf SFM Project), State Fund (RMK9)	Budget approved : RM1,600,000.00 Overall expenditure only RM1,287,830.01, REVOTE RM276,870.00 due to payment for contractors until 2012. 80.49% percent spent up to the end of December, 2011.