



# **Cloudy Bay Sustainable Forestry Limited: Forest Management Area (FMA)**

## **Management Plan Public Summary**

**2012**

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## 1. Introduction

According to the Forestry Stewardship Council National Standards for Papua New Guinea, a public summary of the primary elements of the management plan as per Criterion 7.2 shall be made publically available and revised annually.

This document satisfies that requirement, however if the reader should have any further queries with regards to the management of the Forest Management Unit (FMU) of Cloudy Bay Sustainable Forestry Limited, please feel free to contact the **Managing Director, Mr. Mike Janssen** at the following contact details:

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## 2. Vision, Mission and Goal Statement

The vision and mission statement has been taken out of the IMS Policy Manual page 9:

### 2.2. Vision

*To become a household name as the leader in certified sustainable forest products in Papua New Guinea.*

### 2.3. Mission Statement

*Cloudy Bay Sustainable Forestry Ltd is a timber development and timber processing company. Our purpose is to provide our customers with a sustainable supply of high quality timber products and be a leader in the responsible management of the environment under our control which will be managed on a sustainable basis and in a manner that ensures the health and safety of our employees. In so doing we will assist in advancing the socio-economic welfare of the people in Central Province."*

### 2.4 Goal

*Cloudy Bay Sustainable Forestry Ltd's goal is to develop an innovative working model for an internationally certified, sustainably harvested forest resource in PNG. The project, in line with Government policy, will develop a fully integrated commercial business developing local people in the skills of forest planning, harvesting and processing and the manufacturing of timber products. End products range from high value furniture to durable housing and construction for a developing and emerging domestic market and to environmentally conscious export markets. Cloudy Bay Sustainable forestry Ltd is bringing lasting development to remote communities with limited opportunities in PNG.*

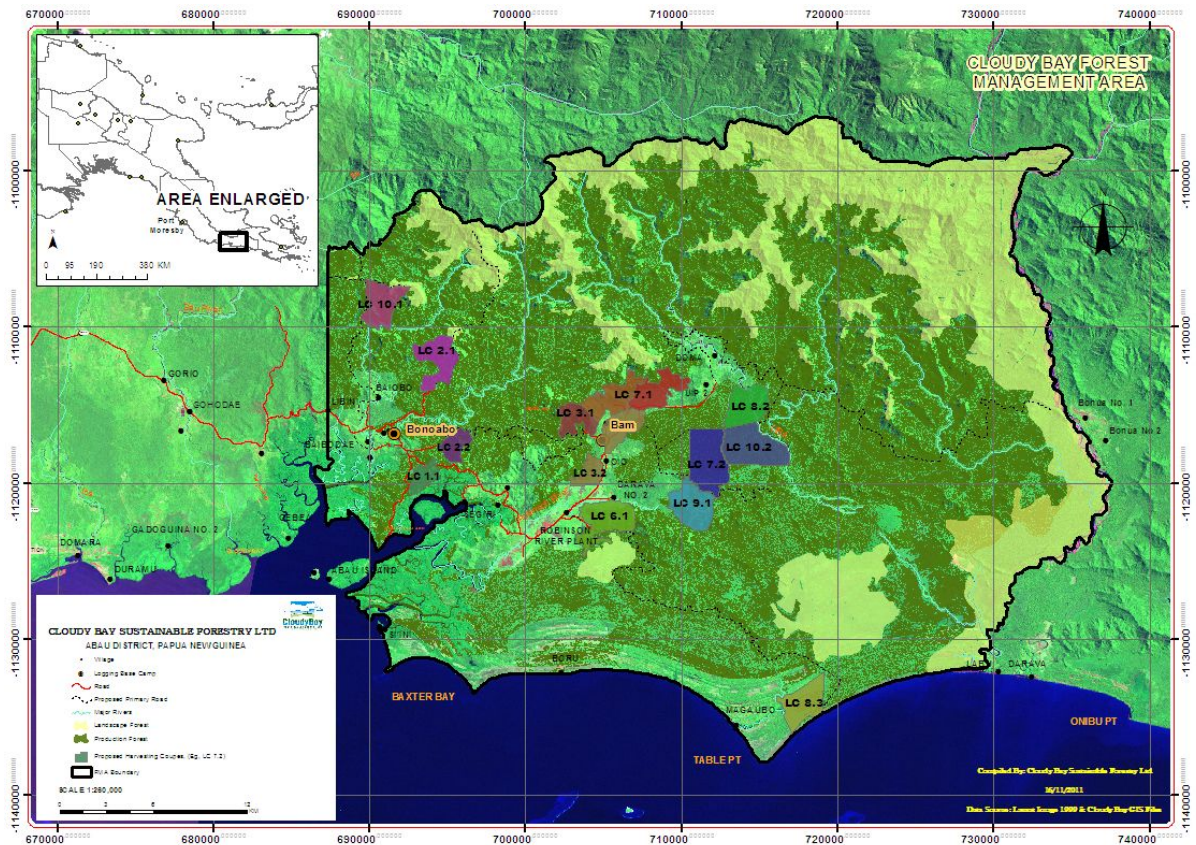
## 2. Location and Description of Forest Management Area

The Cloudy Bay FMA is located in the Abau District of Central Province. The Bam Sawmill and Forestry Office is located within the FMA, approximately 270 km from Port Moresby.

The FMA is bordered by coastal plains in the South East and the Owen Stanley mountain range in the North East. The Ganai Timber Authority (TA) is on the North Western boundary.

The FMA is located between the latitudes of  $- 9.912919^{\circ}$  North,  $- 10.288586^{\circ}$  South,  $148.701310^{\circ}$  West and  $149.162822^{\circ}$  East.

Figure 1: Cloudy Bay Forest Management Area



The general forest formation of the FMA is comprised mainly of primary lowland to montane tropical rain forest. The soils in the FMA vary from silt loam to clays and clay loams, the slopes have a tendency to be erodible and landslips are common after heavy rain or soil disturbances.

The climate of the area is mostly tropical with periods of high or low rainfall. Since the inception of the FMA, rainfall patterns have been varied with no distinct wet or dry season being encountered, although historically, the wettest months are between April and November. Mean Annual Precipitation (MAP) for 2012 was 3,627 mm, the previous year it was over 4,000 mm.

In terms of significant fauna, species such as New Guinea Harpy Eagle, New Guinea Salt Water Crocodile, Cassowary's, various birds of paradise, tree kangaroos and some rare bat and rodent species have been recorded.

The FMA is designated under the Timber Permit (TP) licence (PNGFA TP 03-01) as a production forest that will undergo selective logging and enrichment planting and natural regeneration.

Areas that will not be logged according to the PNG Logging Code of Practice include:

- slopes > 30°
- Buffer zones around perennial streams, villages, gardens, mangroves, swamps and sacred and culturally significant sites

- High Conservation Areas (specifically mapped as such)

### 3. Scope of Forest Management Area

The scope of the FMA is represented as follows:

• Gross Area	148,434 ha
• Logging Rotation	35 yrs
• Allowable Annual Cut (AAC)	48,000 m <sup>3</sup>
• Slope classes 0-30 <sup>0</sup>	144,787 ha
• Slope classes >30 <sup>0</sup>	3,647 ha
• HCVF, buffer zones and other areas excluded	76,833 ha
• Nett area for harvesting	67,954 ha

The AAC has been determined from the Nett area available for harvesting.

### 4. Forest Products

Logs obtained from selective harvesting of trees of DBH (diameter at breast height - 1.3 m) from Logging Coupes (LC) within the FMA are transported to the sawmill at Bam and sawn into boards of various dimensions. The packs of board are then barged to Port Moresby for further processing into a saleable product at the Wood Processing Centre (WPC) at Cloudy Bay's head office.

Although the AAC indicates that 48,000 m<sup>3</sup> of logs may be harvested per annum, this level of production has not yet been achieved by Cloudy Bay due to the following issues:

- Land Owner disputes blocking access to Logging Coupes and Set-ups
- Wet weather conditions restricting access into the Set-ups
- Poor mechanical availability of harvesting equipment due to lack sufficiently qualified and experienced workshop staff

The harvesting performance over the past six years of the project is tabled as follows:

Year	Contract Volume	Minimum Volume	Actual Volume	%
1	60,160	15,000	9,902	66%
2	60,160	25,000	6,442	26%
3	60,160	30,000	8,388	28%
4	60,160	40,000	10,943	27%
5	60,160	50,000	14,659	29%
6	60,160	50,000	23,484	47%
<b>Total</b>	<b>360,960</b>	<b>210,000</b>	<b>73,820</b>	<b>35%</b>

Table 1: Six Year Harvest Records CBSFL FMA

In 2012, 23,484 m3 of logs were harvested at the FMA. The contract volume of 60,160 m3 is the original figure determined as being sustainably annually harvestable and is the amount contracted out by the National Forest Service to Cloudy Bay, however more recent research has indicated that only 48,000 m3 can be sustainably harvested off the FMA.

These logs are processed on site through the Bam Sawmill and packs of rough sawn board are produced for shipment to the WPC Sawmill in Port Moresby.

The production of the sawmill is tabled as follows:

DATE	2007		2008		2009		2010		2011		2012	
	Volume	Recovery	Volume	Recovery	Volume	Recovery	Volume	Recovery	Volume	Recovery	Volume	Recovery
Jan	-	-	646	61%	-	-	-	-	604	55%	74	55%
Feb	102	105%	669	80%	176	48%	78	55%	999	58%	1,049	62%
Mar	506	75%	706	70%	818	63%	430	54%	989	56%	1,703	60%
Apr	440	172%	463	62%	666	58%	546	54%	797	58%	558	61%
May	634	72%	17	27%	528	61%	637	65%	584	55%	1,506	68%
Jun	647	67%	552	55%	509	53%	689	56%	393	63%	300	65%
Jul	462	70%	557	76%	507	54%	697	68%	16	91%	436	62%
Aug	516	57%	486	66%	614	60%	793	74%	1,103	55%	1,358	60%
Sep	473	66%	-	-	452	51%	596	86%	1,236	57%	1,434	66%
Oct	427	54%	-	-	606	60%	1,075	80%	1,200	59%	1,908	65%
Nov	248	72%	-	-	318	55%	708	62%	895	51%	1,260	62%
Dec	348	44%	-	-	-	-	565	65%	241	60%	410	61%
<b>Totals</b>	<b>4,804</b>	<b>68%</b>	<b>4,097</b>	<b>66%</b>	<b>5,193</b>	<b>57%</b>	<b>6,813</b>	<b>66%</b>	<b>9,057</b>	<b>57%</b>	<b>11,996</b>	<b>63%</b>

Table 2: Volumes sawn in Sawmill since 2007

The sawmill production is also not high as planned for the following reasons:

- Incorrect sawmill design, not suitable for tropical hardwoods with variation in log form
- Inconsistent log supply from harvesting
- Sawmill operators insufficiently experienced and skilled



Once the sawn board is received at the WPC, it is further processed into a value added product which is sold mostly domestically. Some of the timber is used in the manufacture of kit homes which are supplied and sold by Cloudy Bay internally for infrastructure projects in the FMA and to the local market. No round logs are exported at all.

## 5. Forestry Aspects

Cloudy Bay operates strictly according to the PNG Logging Code of Practice with regards to Reduced Impact Logging, roading and bridge construction. NFS (National Forest Service) has a representative on site at all times and part of their responsibility is to ensure, through regular inspections and audits, that Cloudy Bay is and remains compliant in all aspects of the code of practice with regards the forestry activities in the FMA.

In addition, Cloudy Bay makes use of local and international consultants on a regular basis to provide up to date training, support and guidance with regards to operational forestry procedures and has compiled a BOP (Best Operating Practice) for each and every task in the forest and the sawmill at the FMA.

The FMA was also recently audited by Woodmark, a certification body for FSC implementation and are a few steps away from obtaining full certification for the FMA.

Cloudy Bay has recently implemented a Permanent Sample Plot (PSP) system in the logged over areas to determine the following information for long term planning and sustainable harvest yields - this is also to closeout a CAR (Corrective Action Request) raised during the initial FSC assessment in December 2012.

Reforestation activities revolve around tending and clearing vines and other competitive vegetation from naturally regenerated seedlings which germinate after the logging has been completed in an area. A local contractor has been engaged and trained up for this task.

## 6. Social Aspects

Although one of the pre-conditions to the issuing of the timber permit (PNGFA TP 3 - 01) is a social impact assessment, Cloudy Bay has undertaken another social impact assessment in 2011 as part of the socio-economic site context of the High Conservation Value Forest assessment report of the Cloudy Bay FMA. In addition to that, a condensed version known as the Social and Environmental Report was also compiled in the same year.

Another socio-economic survey of the communities located within the FMA is planned for 2013. This survey will be conducted by suitably qualified consultants.

As part of the Cloudy Bay FMA Forest Development Project Agreement between Cloudy Bay and the PNG Forest Authority, certain infrastructural projects such as schools, churches, community halls, medical centres and roads are required to be built by certain time frames. Cloudy Bay is also required to provide medical services to local communities within the FMA

which is ongoing. A qualified Nursing Sister is present at the Bam Medical Centre at all times and she also undertakes clinic visits to surrounding villages within the FMA on a regular basis.

A police presence is maintained at the Bonoabo and Bam camps for safety and security within the FMA.

Details of all the infrastructure projects are laid out in the FMA Forest Development Agreement document.

In keeping with the Forest Development Project Agreement between Cloudy Bay and the PNG Forest Authority, Cloudy Bay has focussed much effort on employment and skills development of people from local communities within the FMA.

Currently over 75 % of the staff at Cloudy Bay FMA are locals and less than 2 % of the staff are expatriate managers. In 2012, a full time Training and Development manager was employed to develop training plans for all staff.

## 7. Environmental Aspects

Responsible and sustainable environmental management of the forest resources within the FMA is of paramount importance to Cloudy Bay. Accordingly, Cloudy Bay has implemented an action plan to ensure that the company attains full FSC Certification during 2013.

FSC or Forestry Stewardship Council certification is recognised and highly respected globally as the standard for the promotion of responsible forest management and any company which has FSC certification has been audited by independent auditors according to a strict set of environmental, social and economic standards.

As part of the certification process, High Conservation Value Forests in the FMA have been identified and all areas which need to be safeguarded against negative ecological impacts of the forestry operations have been also been identified and mapped. In 2011, a HCVF survey was done by consultants and staff, which enabled the complete HCVF Report to be compiled.

Cloudy Bay has already attained the FSC Controlled Wood and Chain of Custody certification and the full Forest Management certification should be awarded in 2013.

Cloudy Bay also employs local consultants to perform Environmental Performance Audits on an annual basis to ensure that all forestry and sawmill activities remain compliant with national regulations.