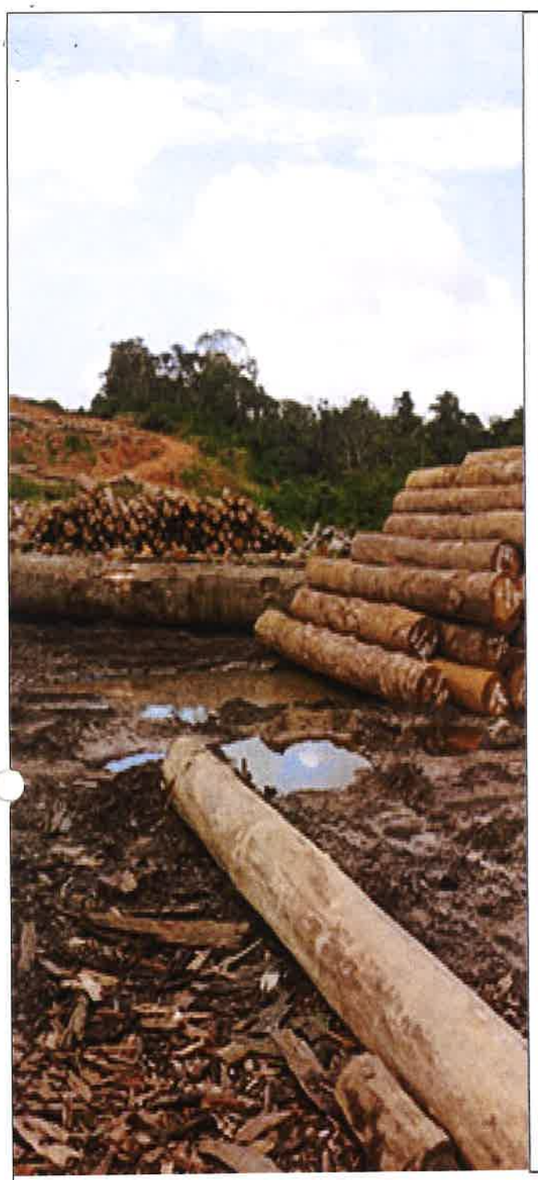


This project encompasses the integrated operations of logging and sawmilling, aimed at sustainably harvesting and processing timber resources for commercial use. The logging activity involves the systematic felling, extraction, and transportation of trees from designated forest areas, ensuring adherence to environmental and regulatory standards

Project Summary

Sawmill & logging

Tulsiram Mangal & Himanchal Mangal

Name of Developer's: Tulsiram Mangal & Himanchal Mangal

Project address: Left Bank Cuyuni River, Left Bank Blue Creek, Right Bank Ekribisi River.

Type of project: Sawmill and logging

Capital Investment: Ten (10) million Gyd

Annual turnover: Five (5) million gyd

Contact details: 6561270

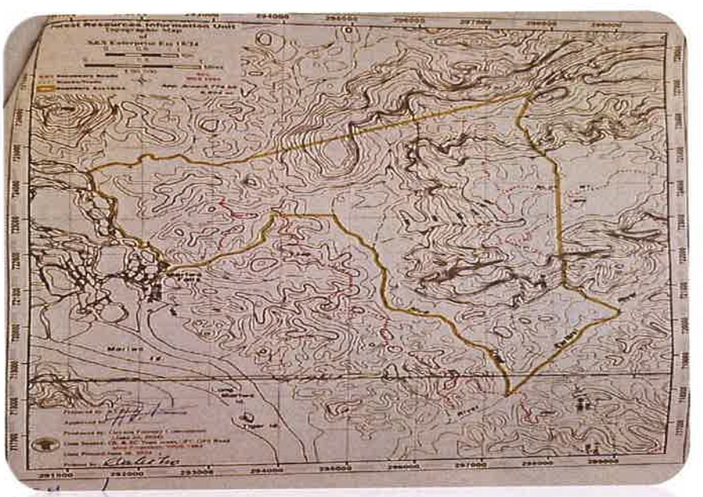
Project Description and location

This logging and sawmill activity involves the full cycle of timber production from forest harvesting to the processing of logs into usable wood products. The process begins with logging operations, which include the identification and selection of mature trees suitable for harvest in accordance with forest management plans and sustainability guidelines. Logging activities typically involve tree felling, limbing, bucking, and skidding or forwarding logs to a centralized landing or storage area.

Once harvested, the logs are transported to the sawmill facility for processing. At the sawmill, logs undergo debarking and are then sawn into various sizes and shapes depending on market demand.

Our team is committed to safety, environmental stewardship, and customer satisfaction.

Mr. Mangal is currently a holder of a Forest Concession, State Forest Authorisation SFA-Ess 18/24 which is situated on Left Bank Cuyuni River, Left Bank Blue Creek, Right Bank Ekribisi River.



The figure above shows the map of the concession

Construction Phase

Land clearing will be done with chain saws and cutlass for the establishment of camps. The vegetation that will be cleared for the establishment of camps will be used as landfilled material for the maintenance of the secondary roads within the SFA. Two (2) camps onsite with dimensions of 30 ft by 20 ft by 11 ft will be setup onsite. Solar lights will be used to provide lights for the camps and electricity will be provided by a 1.5 Kva generator.

Operational Phase

The sawmill is fed with logs that is harvested from the same concession Ess 18/24. The sawn products are transported to customers in different parts Guyana. e.g. Lumber Yards or construction.

A total of six (6) persons will be employed to prospect merchantable logs and harvest these trees with the use of a chainsaw. After felling, the logs will be transported by a tractor to the ramp. The logs will be offloaded from the tractor and discharged into the log pond. The logs are temporarily stored in the log pond, which has the capacity to hold approximately 200-220 m^3 of logs. From the log pond, the tractor will transport the logs to the mill for processing to remove the bark and saw it into rough lumber. Logs will be harvested based on the allowable tags issued by GFC for the year. Further, the stumps will be recorded (GPS) by the chainsaw operators to ensure logs are harvested in keeping with the Code of Practice of GFC. It is expected that approximately 20,000 bm logs per month will be processed at the mill within the concession. Rough lumber is produced such as Tatabu, Torinario, Silverballi, Purpleheart, Greenheart, and other lumber species will be processed onsite. There will be a mill shed on site with wooden foundation to dampen vibration (dimension of 30x 60).

Equipment on site entails:

1. One (1) woodmizer
2. Three (3) chainsaws
3. One (1) tractor
4. One (1) bull dozer
5. One (1) 1.5 kva generator.

Personal Protective Equipment (PPE) are given to all employees such as long booths, helmets, air muff, dust mask and visibility vest. Additionally, one first aid kit and one snake bit kit is present on site at all time.

Fire extinguishers and sand buckets are placed at strategic points of the operation and a "No Smoking" sign will be placed in a contiguous area.

Water for drinking are purchase and taken to the operation as needed. Water for domestic purposes is source from creeks and other water ways located within the SFA and electricity is provided from solar panels.

Environmental Impacts

Noise Emissions

The noise emissions emanated from the chainsaws and tractor.

Particulate Matter (dust)

Sawdust is emitted during log harvesting, as well as dust generated when vehicles travel along the trail during dry weather.

Hazardous materials/waste

If these materials or wastes are not properly stored, it can result in an accidental spill or discharge may occur, resulting in soil pollution.

Fire

Flammable substances such as gas and diesel are stored onsite and if not managed properly, can be ignited if a worker who smokes discards a burning cigarette butt.

Water quality impacts

The removal of trees and disturbance of forest soils can cause increased sedimentation in rivers and streams, which can have detrimental to water quality and the aquatic ecosystems.

Habitat Loss and Fragmentation

Logging can destroy and fragment habitats for a wide range of species, including animals, birds, insects, and fungi. This can lead to a decrease in biodiversity and ecosystem health.

Soil erosion and degradation

Logging can disturb the natural structure of forest soils, causing erosion and reduced soil fertility and making it more difficult for new trees to grow. Also, this can have an adverse effect on water quality during rainy weather conditions.

Carbon dioxide emissions and Climate Change

Trees absorb carbon dioxide from the atmosphere, so logging can increase carbon dioxide emissions, contributing to climate change. In addition, trees play a vital role in managing local and regional climates by cycling water and moderating temperatures.

Cumulative Impacts

There are several other active small-scale logging concessions surrounding this concession, which can impact air, water, and land cumulatively.

Mitigation Measures

Noise Emission

The noise levels generated are expected to be insignificant since the tractor and chainsaws are equipped with an exhaust stack. They are serviced and maintained every month so as to reduce emissions into the environment and downtime. Chainsaw blades checked and replaced with sharp ones. Workers will be provided with appropriate PPE, including hearing protection.

Particulate Matter (dust)

During dry weather conditions, the speed limit of 30 km/hr. is adhered to. The chainsaw operators will be provided with the appropriate PPE dust masks to protect them from dust, long boots, visibility vests, hard hats (helmets) and gloves. The technique utilized is selective logging thus leaving the majority of the forest intact and adequate forest cover hence minimizing the dust emissions within the concession.

Hazardous materials/waste

Fuel stored on site; fuel such as diesel is stored in 45-gallon drum and also gasoline will be stored in 45-gallon drum as well. Fuel will be stored with the waste oil generated from the servicing of the tractor is set at a designated area within the SFA located approximately 200 meters away from creeks and other water ways.

Waste oil is generated from the servicing of the tractor, bulldozer and chainsaws once per month. The quantity of waste oil generated is 5-6 gallons and is reused on the chainsaws. The waste oil is stored in the 5-gallon tightly closed plastic pail in a designated area at the campsite.

Fire

Workers will be briefed verbally on the importance of fire safety almost every week, and a 'No Smoking' sign is placed at the fuel storage area. A sand bucket and a fire extinguisher is placed on site and can be easily accessed should there be a fire emergency.

Water quality impacts

Buffer zones along water bodies such as rivers, streams, etc. will be maintained to prevent soil erosion and protect water quality and aquatic habitats.

Habitat loss and fragmentation

Logs will be harvested based on Reduced Impact Logging (RIL) techniques, which result in the conservation of ecosystems and biodiversity.

Soil erosion and degradation

Logs will be harvested in accordance with Condition 5.1(a)(b) of the State Forest Authorizations

(SFA) Agreement as well as GFC's Guidelines for Forest Operations, 2018. Also, vegetative cover will be maintained on the edges of the trail to reduce the displacement of soil particles. Buffer zones will be maintained, and the harvesting of logs will not be done within the buffer zones.

Carbon dioxide emissions and Climate Change

Logs will not be cleared-fell but will be selectively harvested based on a breast height of 1.3 m and a diameter above 35 m. However, if there are more than one (1) tree within an 8-metre radius, only trees over 40cm at breast height will be harvested based on the GFC guidelines. This practice leaves the majority of the forest intact and helps preserve the carbon stored in the trees and soil, thus reducing the release of CO, into the atmosphere and also allowing saplings to continue absorbing CO, through photosynthesis. Also, it minimizes soil disturbances during logging activities, thus maintaining the integrity of the forest floor and preventing the release of stored carbon from the soil.

Cumulative Impacts

The proposed project has the potential to impact air quality such as particulate matter result in dust nuisance and noise nuisance generated from the operation of the tractors, chainsaws and portable sawmill. To abate these impacts, the portable sawmill is placed on wooden foundation to reduce vibration and noise levels. Wood waste such as sawdust, wood skins, wood ends and wood strips will be used as land filled materials throughout the SFA. Hence, no one will be affected from dust and noise nuisance generated from the operation. Cumulatively, the impacts on air, land and water will not be significant since the concessionaires have to adhere to the Code of Practices and regulations established by GFC to ensure that logging is done in a sustainable manner and the Environmental Protection Act and its associated regulations for environmental protection.

Waste management

Domestic waste inclusive of plastics bottles, vegetable skins, food scraps, etc. are placed in a waste pit located approximately two hundred fifty (250) meters away from creeks and other water ways within the SFA and when fill will be covered with soil and another waste pit is dig.

Wood waste such as sawdust, wood skins, wood ends and wood strips are used as land filled materials throughout the SFA.

Prepared by……………………