

THE IMPACT OF LOGGING ON WOMEN AND CHILDREN IN BAMU WESTERN PROVINCE, PAPUA NEW GUINEA

ABOUT THIS PAPER

1 BAMU PROFILE

The Bamu Region is divided into Upper and lower Bamu. Upper Bamu covers a large portion of the mainland. A little part of that mainland and the five islands is Lower Bamu with 18 villages and a population of approximately 3,000 - 4,000 people. There is about 15 - 20% literacy rate for the whole populace and around 2% of women can read and write.

Most of the region is swampy and muddy. There is no source of clean water. There is tide bore regularly when the difference of the changes of water level from low to high tide is negative. This is a kind of flash flood of sea water going up the river. It goes very fast and has led to massive erosion of the river banks. Many sand banks and mud banks are coming up. From time to time, many people have to relocate their houses further and further inland.

Bamu region is 160 kilometres to Daru, the capital of Western Province. People usually travel by canoe, dinghy and boat. From Bamu to Daru takes 13 hours straight travel by boat and 9 hours by dinghy. But usually you cannot go straight because of the many wide sand banks and mud banks. It is just too easy to get stuck.

At present, there is only one functional aid post at Lower Bamu and this is a Sislami. The aid post at Bimaraio was closed due to lack of personnel. Those at Torobina and Piru-Piru were closed down because of too much fighting going on in the village and the aid post orderlies have fled. At Upper Bamu, there is a Health sub-Centre, government station, an airstrip and a community school at Emeti. At the logging base camp in Kamusi, a small clinic is owned by the company with a Filipino doctor and local nurses staff. At present, the company is making another air strip in Maipani, Lower Bamu in addition to that of Kamusi.

The biggest trade store is at the logging camp in Kamusi and is owned by the logging company. Most of the stocks come from Malaysia and Singapore and some from Indonesia. There are two other big stores owned by some of the local landowners who have received royalties from the company and one small store in the Catholic Parish at Sislami.

■ PRE-LOGGING PERIOD

In the stories people narrated, they remember with joy the good things they enjoyed before the logging company came in the area. Such good memories are expressed in their statements:

Environment

Our life in the past was better than today. Our creeks and rivers were deep and clean. The river was our main water tank. We drink and cook food with water from the river. There were no mud banks and sand banks and be tide bore in Sislami. Our ancestors had a better life. They looked after their resources ber well.

Food

The women say: "Before, we have plenty fresh food and garden crops. Our river was very rich with fish, crabs and prawns. We had plenty catch, even if we thrown the fishing lines just in the river banks. Making sago was easy for us. Our husbands cut the sago trees in the bush and floated them in at the village creek during high tide".

Health

Most people were in good health and the men were strong. They can carry heavy log. There were very few sicknesses. Malaria fever was seasonal, only in December during the northwest wind. People lived longer in the past than this time.

Population

The people stayed in their villages most of the time. Occasionally, they sailed to Balimo and Daru only during feast of the dead where they had to sell fish, crabs, sago, coconut and garden crops.

Consciousness

There were many things people did not know about like dinghy, engine, boat, plane, radio, coleman light, mosquito net, store goods *and* so on. They did not know about money and its importance.

Cultural practices

In the early time, bride price was never a problem because we used the custom things like shell money, dance wristband, necklace, shell strings, tapa clothes (tree bark), bows and arrows and pigs.

Social Problems

It was peaceful before. The only trouble was the tribal fight. There was prostitution but minimal. Our exchange payment was not cash but more on smoke, tuba, fish or clothings.

III. LOGGING OPERATION ERA

A. Logging in the Bamu (Kamusi)

1. The Logging Company: Rimbunan Hijau (RH)

The name of the logging company is Wawoi Guavi Timber Company, which is named after two rivers that split from the mouth of the Bamu River. The company was previously owned by the Straits Engineering Company. In 1989, Rimbunan Hijau (RH) bought it. RH is a Chinese Malaysian company that is based in Singapore. It is owned by the four Tiong Brothers. Two of the brothers were previously senators in Malaysia and one is a very rich doctor.

The expansion of RH is great. Presently this company controls 85% of all logging concessions or Timber Rights Purchases (TRPs) in PNG. They are operating in Central Province, in West New Britain, New Ireland, East Sepik and other provinces. In Western Province they have been based in Kamusi, but now they are expanding far into the northwest into an area called Ali Makapa. In 1991, RH was operating logging concisions through ten different sister companies by the end of 1992, it was eighteen. By April 1993, the number of sister companies had reach thirty. In 1995, it has gone up to forty-eight.

Company employees say that it's easy for RH to get all the TRPs and control all the logging companies here, because the people are uneducated, unaware and so easily tricked. There are two local landowner men who are supposedly representing their people through a landowners' company. They just talk between themselves and with the company, and then sign the forest away. The company easily tricks the landowners who give their rescuers away all too easily.

The company also engages in a lot of graft and corruption. They bribe the landowners. They fly them to Moresby, and put them into the big hotels and they can win the landowners over just with that. I spoke to one of these men. I asked him, why are you letting all of your land be logged? His answer was:

**Anyway, one day we will die, and we want money, we want to experience what other people are experiencing. ^N*

So they like to travel to Moresby. That's the simple and most common bribe that works.

2. Logging Practices

There is no implementation of government policies. Large areas of forest in Block 1 were logged in 1981 and 1982, before RH actually had the Timber Rights Purchase (TRP). Workers in Kamusi say that for the last seven years, not a single forester, no surveyor or land officer, no supervisor, no one. It's only the company forester who surveys the areas to be logged. The people don't have any idea of the law, nor the likely physical/ecological impact of the logging of their forests. What is uppermost in their minds now is the money that they can get. That explains why the company can get away with illegal logging. No one really knows what's happening.

The Wawoi Guavi timber area consists of 484,000 hectares, with approximately 500,00 cubic meters of timber resource. According to the company they are practicing selective logging: they supposedly only cut particular trees that are big enough and of the right species to log. The forest is said to be about 250 years old, and the company foresters say that in technical terms, the forest is actually very young. They claim that per hectare, there are only four or five trees suitable for logging. These loggable trees have to be at least 50 cm in diameter. That is usually a tree that is about 150 years old.

So they claim to be logging selectively. However, during one of our trips we went right into the logging area, together with some staff from the Melanesian Environment Foundation and a Japanese nun who has conducted a survey on logging throughout PNG. One of the foresters working with the company accompanied us. What we saw was selective logging, but much more like clearfelling. There were roads made all over the place, and a lot of small side roads (Down one of those side roads we saw some women, the local prostitutes.)

Waste of natural resources is high. The local people working with the company claim that many felled logs are wasted, we saw for ourselves how many logs are being buried in the ground and rotting, hundreds and hundreds of logs. They are basically dumped because it is decided that they are not good enough for the market. The logging company claims they were cut by accident.

The company claims that they cannot avoid destroying a lot of other trees in the process of getting at the trees they want. Even if they only intend to cut one tree, then the others will fall. That is their excuse for also shipping out many undersized logs. Workers say it's like gardening, and they are just uprooting the weeds. They told us that we would hardly know that the area had been logged. But when we went in we found that the area had been really destroyed.

Logs are shipped out by tugboats and barges, and by simply tying the logs together and floating them out as a raft. The estimated value of one barge-load of timber is many million Kina, according to the company foresters. There are many sites along the Bamu that serve as tugboat sites, although they cannot travel into some areas because of the sand banks.

The company has to make an inventory of the logs that they are taking out, because some of the people cut the raft ropes so the logs float into villages. Then the village people keep them for making their canoes. This is also a kind of money-making project of the people, because sometimes they ask the company to pay compensation to them for retrieving the log. The company supervisors have to spend quite a bit of time going around the villages looking for the logs that have gone astray. The company claims that if the company cannot meet the export quota within three days, they will be obligated to pay K3,000 per day to the buyers. So there is pressure on to look for the missing logs.

Currently RH is building its own tugboats, because it is cheaper to build here rather than to buy elsewhere and bring them in. Recently they have said that with the expansion in logging areas, RH will no longer build tugboats. They will contract a company to manage all the tugboats and get the logs out, so that they can cope with the increased volume. One area they plan to log now is estimated to be close to one million hectares, compared with 484,000 hectares they have been logging over the past twelve years.

Logs are exported from Umuda where there are many export ships (including cargo ships for the Ok Tedi mine). According to the company managers their leading customer is Japan. Others are Malaysia, China, Indonesia, Thailand, Germany, Singapore and the Philippines. There are 67 different customers ready to take logs from Umuda, including three Filipino companies. The company operates a sawmill to produce timbers as part of the requirements.

3. The Workforce of Rimbunan Hijau

The number of employees in 1993 has increased a lot because of the expansion of logging areas into Ali Makapa. There are now about 400 - 500 employees.

Among the expatriate workers, the highest proportion are Filipinos, (about twenty-five at any one time). But now more and more Filipinos are coming in, as well as Malaysians, Tais, Indonesians, Koreans, Singaporeans and Chinese. There are also PNG nationals from Manus, New Ireland, East New Britain and West New Britain provinces, and workers from Dane, Bamu and Balimo in Western Province.

There are a few women workers. There are two Thai cooks and a Malaysian woman in the accounting department. Since 1991 there have been local women working in the sawmill, which is part of RH's contract with Government. They work there barefoot and they have no masks to protect them from the sawdust. One of the ladies working there recently became very sick. In fact they all look very thin and sickly.

Employees' pay is ranked according to nationalities. The PNG nationals are all casual workers. None are on contract. They are not paid overtime. The local casual workers share rooms that have no furniture and no power or water. They collect their water from a well. The local contract workers have family accommodation.

The expatriates are on contract, so they enjoy overtime pay and bonuses. They have Overseas allowances when they go on holiday and they have two weeks of holiday after the first twelve months of service. They were housed in individual furnished rooms, with shared kitchens and bathrooms years before. Now, the company builds new and better houses with air-conditioned rooms.

The company maintains a mess hall for expatriate workers, but the local workers buy their own food at the store and cook it for themselves. The company trade store is not a part of the company's contract with the Government. The workers often say that the company gives them the money for their work, but only for a few hours. Then they take it back again, because the workers have to buy from the company store. (At one stage the landowners were angry about high prices and closed down the company store.)

The company has one doctor to attend to the company employees, operating from a small clinic. At later part of 1994, the company builds a bigger clinic with several rooms to accommodate a number of patients. For recreation, there is basketball for both local and expatriate workers. They play together. The Filipinos have a small hall for drinking and socializing, not really for heavy drinking. Recently they got satellite TV in the Filipino bunk houses. The other expatriates probably also have it.

There is no labor union. Anybody who complains at all will have some salary cut. If it reaches the administration level, they will be sacked. One of the company employees who has just arrived recently told me that he has seen many injustices, but that he cannot speak if he wants to keep his job.

4. Royalty Payments to Landowners

The company pays royalty to the landowners through the National Government. Payments of K400,000 are made twice a year in January and July. The landowners once complained that the company pays on time, but the Government first invests the payments and accrues some interest. So there are delays in payments. The National Government eventually forwards the payments to the Provincial Government through Forest Officers, and then the money is put into the landowners' passbook (Bank book). The leaders of the clan who are signatories then have to travel the long distance to Daru, spending lots of money in the process in order to withdraw the money. They complain about this process.

It is not known if they get the full amount. How are they possibly to know? When the landowners withdraw cash they change the money into K50, K20 and K10 notes, which they distribute among all the members of the clan. If there are fifty members, then there have to be fifty bills. Each person is first given K50.00. Depending on the number of clan members, they start giving out smaller bills so that even the small babies receive a note, usually only K10. So it's quite unlikely that anyone is really monitoring how much comes in and how much is actually distributed.

People don't question very much. Their whole orientation is towards receiving money in their hands and this process seems to satisfy them.

B. ENVIRONMENTAL AND SOCIAL IMPACT OF LOGGING

1. Physical Impact: Erosion, Sedimentation and Water Pollution

The river is the main source of life. Villager claim that before the logging company came into the area, their creeks and rivers ran deep and clean.

Now the creeks and rivers are becoming more and more shallow. There are many more wide mud banks, and sand banks are now all over their area. Boats are getting stuck. People say one reason for this is the tide bore. During the low tide the river is shallow, and when the sea water flows up as a tide bore, it brings the sand banks up into the river. For example, in Sislami there was no tide bore before the logging, but now it is very severe.

Also when heavy rains come the people notice that soil in the logged areas is washed out into the creeks and rivers. There is a lot of erosion and sedimentation.

The barges create big waves and this also leads to constant and enormous erosion of the river banks. There are up to three tugs passing by at any one place each day. Another cause of sedimentation is that logging waste products such as barks are dumped into the river.

Now there are often floods. In the past when it rained the water level would not rise high in the Bamu. Now when there is a week of heavy rain there are always floods, and the flood level seems to be getting high and higher.

Water in the creeks is now very polluted with mud and wastes from logging: small logs, bark, leaves and branches. You can also see engine oil floating on top of the water. It's dirty and unsuitable for drinking. But in fact people do not have a choice, especially during the dry season when there is no other water available. People are forced to drink and cook from these dirty rivers. The only other option is coconut water. When travelling on the river, if a child cries from thirst the parents automatically scoop water from the river. Even when river is boiled and left to settle down, the colour does not change from gray/brown.

2. Impact of Environmental Changes on Food Gathering: Fishing, Hunting and Gardening

Villagers claim that before the logging, they had plenty of fresh food, a lot of garden crops, and no hunger. Bamu women say there were lots of crabs and prawns and fish:

"We would just thrown lines from the side of the river and we would always catch something."

"Looking for food is difficult nowadays. Fish and prawns are now becoming scarce. We have to go right into the bush to find them."

They have to go to distant places where the tugboats does not pass. If they want to gather crabs they have to go to far away islands. They take the crabs to Daru or to the logging camp at Kamusi to sell.

Most of the gardens are now covered by water when the high tide comes. People have to find a very high place that is safe away from the rising flood levels. But it is hard to find such land, so this change in the environment has really discouraged the women from making gardens. They don't want to go further inland because there are too many snakes.

The men say that the noise level of the tugboats really affects their hunting. There are increasing numbers of unsuccessful hunting trips. The hunter returns empty handed because the noise level has driven the pigs far away into the heavy forest. Sometimes they are just poised to shoot pigs when a tugboats comes, and the pig starts to move. If the pig is not killed instantly, it may turn on the hunter. There are many of these cases at the clinic: hunting accidents because the hunted animals are disturbed or alerted at just the wrong moment by tugboats.

3. Impact of Environmental Changes on Sago Production and Women's Work

Before the logging, it was very easy for women to produce the staple food of sago. When the waters in the rivers were clean and deep, the men would go into the bush, fell the sago palms and float the sago logs down into the village. So the women did not have to go to the bush and cut those palms down themselves.

Now that the rivers are drying up it has become very difficult for the women to make the sago. It is now much harder, even impossible, to float the sago logs into the village. So the women have to go into the bush and do the whole job from felling right through to processing the sago starch. They may have to stay in the bush for many weeks at a time in order to make enough sago for the family. The men stay at home and look after the children. They now leave the women to carry the heavy load. The men won't go into the bush anymore:

"Most of the time our husbands don't help us to look for or work for food, especially the sago starch, which is our staple food."

The work of cutting the sago is very, very difficult. The men claim that the making of sago is not their work that their role is house and canoe building. However in fact the men did traditionally cut the sago palms. They are unwilling to do it now.

The women use a lot of water to process sago, and because the water out in the rivers is now shallow and dirty it is not good enough. So they must dig water holes deep in the bush to find clean water. This is a new task for women.

It's common for the women to have to go back into the bush for three days running to prepare a decent supply of sago for the family. They will go into the bush in the early hour of the morning and come back very late in the afternoon or at night. And the whole time that they are away the children will be left hungry. They are crying all the time. Sometimes the babies are brought crying to us, but I have to tell them that this baby is not sick but hungry. I ask the fathers why they don't give coconut milk to the babies. But the fathers have grown so lazy. Sometimes when the child is thirsty they will give it water directly from the creek or rivers.

Women Speak of Their Plight:

"Life has become more hard for us women today. Our children often get sick and some die for lack of food, water and medication. We have to walk very far inside the bush to get water from the swamps. At dry season, the swamps are dried up and we are forced to drink water from the Bamu River. In most cases, we get sick of diarrhoea and skin ulcer, especially the children. Water in the river is very dirty with mud, floating leaves, roots, trees, logs and oil from tugboats of the logging company. Our garden crops are mostly dead after they are flooded. If ever they grow, they have very little produce. Only banana and coconut grow well."

4. The Cash Economy: changing People's Values

Before the logging, people rarely went out of the village, and usually only for trade or special occasions. There was enough food around. There was no idea what a boat, dinghy or outboard motor was. People did not know about radios, kerosene lights or mosquito nets. People used to distil an alcoholic drink from coconuts, which was also used as a kind of currency. Bride price was paid only in traditional wealth, not the large amounts of cash that are being demanded these days.

With the coming of the company there has been a big impact with the introduction of the cash economy. logging came to Bamu in the name of development, to give incomes to these rural people and to the Government. The big question now is whether there is any real development in the lives of these people. Is this really development? There are such enormous changes going on in their world.

Values are changing, especially the introduction of materialism and consumerism. this is affecting the people in even the most remote comers of Bamu. As people begin to see the power of money it affects their whole value system. Everything that the people now do is coloured by their obsession for money.

One effect of this is population migration. There is plenty of money around the logging camp. Most of the men have gone to the logging site and some have gone to a new site of oil exploration. Otherwise they go to Daru. They say they must go because there is money there. Now most of the villages in the Bamu are half empty.

In terms of food taste, more and more people are becoming more dependent on store goods because it is easier to buy store foods than making sago in the bush.

Some children do not like to eat sago anymore. With store foods like flour, many women do not like to make garden anymore because garden crops has become hard work for them.

The bride price has become more expensive and demanding because custom things are not accepted anymore. Payment must be in cash. Marriage without exchange is K500.0 and up. With exchange it is K150 and above.

5. Social Problems Due to the Impact of Logging and the Cash Economy: Gambling, Prostitution and Violence Against Women

In Kamusi there are a number of major social problems brought about by the impact of logging and the cash economy. The first one is alcoholism.

The minimum pay for local workers is K45 per fortnight. Others is a higher level of work receive K70-80 per fortnight. Out of their income, K40 will be spent on one carton of beer. This is the number one thing that people buy from the landowners' store in Kamusi. (The company store does not sell beer.) The impact of alcoholism on women and children is best shown by the words of women themselves:

"When my husband gets drunk with tuba (kava) he used to beat me. It makes my life difficult."

"When men get drunk in the village we women have to run to the bush with our small children to hide from the bows and arrows and spears the men use when they start fighting"

The next biggest problem is gambling. Some men take their wages and bet with K50-K100. Often of course, they lose. In no time the fortnight's wages are gone, and the family is without money. In the words of another Bamu woman:

"My husband gets the money I earn...or save...for himself."

This gives rise to the third main social problem which is prostitution. The husband is unable to bring anything home to his wife because he squanders it on drinking and gambling. But in the Kamusi camp you need money to buy food to live, so the husband turns around and forces the wife into prostitution to raise money for the

family's subsistence. The sex business is everywhere in Kamusi. It's a very serious problem at this time. Almost everybody is involved in one way or another.

Prostitution is not just confined to the logging base camp. It has spread all over and is affecting all couples. It is common among couples who already have two to three children. The problem is also affecting young couples. When the tugboats are anchored in the stations along their way down the Bamu, the men bring their wives and daughters in canoes to sell to the crew. The living proof in many villages are increasing numbers of mixed race children, many with Asian blood.

When asked why there is so much sex exploitation, the men claim it is for survival. But that is related to the fact that the men no longer want to work hard and the problem of the misuse of money by the men, especially on drinking and gambling. When people migrate to Kamusi or Daru, they have no relatives to feed them or house them. That is why you find organised prostitution in every corner of Daru.

Another cause of sex exploitation is wife bashing. If the wife is unwilling to prostitute herself, the husband may beat her. So out of fear she must do it. The men insist that this is the easiest way to get money. They think it's easy.

6. Illiteracy and ignorance perpetuation problem:

As most of the parents have not been to school, they are not conscious of education. Even if there are chances for children to go to school, the parents do not send them. Some times, some parents pull out their children from school, when they decide to go to Daru or Kamusi to earn money. Boys have more chances for schooling because there is no need for parents agreement. The father can send them even without the mothers concern. The girls have very little opportunities for education. Parents must agree to together. Most fathers do not like to send their girls to schools for security reasons. And the majority of the mothers refuse to send the girls to school because they teach them how to make Sago at **early age**.