

2005 Ok Tedi CMCA village survey for the Mineral Policy Institute

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Contents

Acknowledgements	3
Executive Summary	3
Methodology	13
Terms of Reference	15
Introduction	18
Village interviews	22
Digam	23
Ningerum	23
Mimingre	29
Sinemarai, Mianmarai and Openai	35
Bige	38
Yeran [Ieran]	41
Kawok	42
Moian	46
Atkamba	52
Kiunga	58
Erekta	63
Membok	65
Mipan	67
Bosset	72
Wangawanga/Aiamback	78
Suki Sepuka	80
Kavianaga Obo	85
Doumori	96
Sui	98
Sepe	101
Buria, Wabada Island	104
Gesowa Village, Wabada Island	106
Usumo, Amada Island	107
North Bank: Tirere	108
Sapore 1	108
Aduru Island	113
Daru	113
Samari Kona	115
Mipani Kona	118
Parama Kona	119
Sepe Kona	120
OTML Literature	122
Press	129
Discussion and Conclusion	132
References	136
Appendices	142

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We acknowledge the inconsistencies of spelling in the text, derived from how names and places were recorded, pronounced or even spelled to and by our researchers. Where the data has held inconsistencies of fact, particularly with numbers (3 or 4 water tanks...), both versions are represented here, just to reflect the variety of replies.

Executive Summary

These are the findings from one preliminary and one main patrol along the Fly and Ok Tdi Rivers, surveying villagers on their level of understanding Ok Tedi Mining Ltd.'s (OTML) Community Mine Continuation Agreements (CMCA's). These agreements were signed by village representatives in 2000 as a means of binding local communities to the ongoing operation of the mine and to limit their abilities to pursue compensation for damages from OTML, and the mine's obligation to pay them damages. A few people signed these for the majority of the villages under controversial circumstances. The CMCA's form the basis of the Ok Tedi Ninth Supplemental Agreement, the PNG legislation allowing BHP to exit the mining operation with minimal compensatory responsibility.

Approximately 30 000 landowners fought a landmark legal battle in the Supreme Court of Victoria(Australia) with BHP1, and in 1996, finally won an out of court settlement from BHP. This committed BHP to compensation payments, and to reducing the environmental impact of the mine tailings, which obliged OTML to implement a practicable form of tailings containment. PNG landowners were led to understand that the company would stop mine waste from entering the river. But in 1999, the landowners returned to court claiming breach of agreement when they discovered only minor adjustments had been made. In addition, acid rock drainage (ARD) has since been acknowledged by the company. A settlement of the second Ok Tedi case came in 2004, perhaps in the face of this ARD. Very few efforts were made to explain to those who remained in the court case why it had been settled, and it is likely there still remains a lot of confusion over this issue. The primary plaintiff representing the case complains that he felt pressured by his lawyers to settle.

Under the Ninth Supplemental Agreement and the Act, a total of six separate CMCA's were executed with the affected communities. For purposes of the CMCA, these communities have been divided into the following six groups (Kalinoe 2003) (emphasis added to indicate villages visited by our patrols):

	CMCA AREA	REGION	VILLAGES
1.	Mine Area	Ok Tedi Mine	Atemkit Kavarabip Finalbin

			Wangbia Migalsimbip
2.	North Ok Tedi	North Fly	Ok Tidetau Boliwogam Nioksikwi Derongo Kunguit Ankit Konkit Walawam Wogam Kolebon Wombon Digam Kawentigin Boungkim Haidowogam Wurikanatko Bumbin Ningerum Tamaro
3.	Lower Ok Tedi	North Fly	Atkambia Ieran Dombre Ambaga Kawok Iogi Komopkin Bombubun Senemrae Kwiape Konkonda Bige Miamre Sarae Demasuke Birimkamba Pastmambin Kungim
4.	Highway	North Fly	Sisimakam Kwilokoai Tapko Hosonai Hiorinkia Awin Ramaro Hosokumgu Pampenai

			Wangenai Iankenai Mimigire Kasrenai Matkomnai Gresohore Ipoknai Dande (1) Dande (2) Hoponai Tope Menumsore Briompenai Rudmesuk Rarengre Miasomnai Gre Tiomnai Gii Grengas Timindemesuk
5.	Middle Fly	Middle Fly	Mepu Uluwas Moian Erecta Kukujaba Karengu Menbok Kwen Mipan Manda Bosset Wangawanga Aiambak Komovai Kaviananga Obo Owa Levame Kasa

6.	South Fly – divided into 4 separate sub-regions with the respective villages as follows:
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SUKI	NORTH BANK	SOUTH BANK	KIWAI ISLAND
Aewe Eniyawa (Daru Gwaku Kautru (Aewe No.3) Kiru Puka Duka No. 1 Puka Duka No. 2 Riti (Aewe No.2) Sapuka Serki Sialowa Dewara Suame Baidowa Dede (Wasua) Lewada	Aberagerema Aroto Doumori Kabaturi (Sagero) Kaiapo Kea Kename Kededibi Maduduwo Maipani Paddaeya No.1 Padaeya No. 2 Pagona No.1 Pagona No.2/Gai Sagero No.1 Tire'ere Urio Waliyama Wariobodoro Domera	Daware Katatai Kadawa Koabu Baramura Madame Mutam Parama Severemabu Sui Tirioi No.1 (Madiri) Tirioi No. 2 Wederehiamo Aduru (Somogi) Sepe/Auti U'uwo	Agobaro Abinio Dameratamu Gesowa Iasa Ipsia Kubira Oromosapu Sagopari Saguwame Samari Wapura Wapi

From these six CMCA's, nine separate trusts, have been created, with at least a trustee from each of these villages to represent them. The various trusts, under each of their respective CMCA's are as follows:

CMCA	TRUST	TOTAL COMPENSATION PACKAGE
North Ok Tedi	Nupmo	Information not available to researcher.
Lower Ok Tedi	Waitri	Information not available to researcher. However previously in 1996, K40 million compensation package as out of court settlement was agreed to be paid under the Alice River Development Trust as part of the Eight Supplemental Agreement.
Highway	Tutuwe	K15 million compensation package with direct

		cash compensation component and a projects component.
Middle Fly	Middle Fly Development Foundation	K57.6 million total compensation package divided into 3 components: 1. Future Generations Trust; 2. Development (Projects) Fund; and Cash compensation (payout) handled and paid out by OTML Community relations officials and not the trust created under the CMCA.
South Fly	Suki Flygogo Development Trust (Suki and Gogodala)	Information not available to researcher.
	Manawete Development Trust (Northbank of the Fly – Balimo side)	Information not available to researcher.
	Dudi Development Trust (Southbank of the Fly River).	Information not available to researcher.
	Kiwaba Development Trust (Kiwai and Wabada group of islands)	K9.5 million compensation package divided into 3 components: 3 components: Development (Project) Fund; Investment; Education subsidy (sponsorship). There is no direct cash payout component.

MPI hired our team to help ascertain how much these impact communities actually know about the CMCAs, and to get a reading of their overall perspective on the mine. This was intended as a flexible qualitative survey rather than an exhaustive data collection. We would take a reading of the socioeconomic status of these communities and impart basic information to them about the CMCA's. In addition, we were to inform these communities of the upcoming Kiunga Summit on the CMCAs and record the issues they would like raised at the Summit. The objective would be to determine whether or not it were possible, if the communities desired, to mount an legal challenge the CMCAs on the basis of lack of informed consent (*sensu* Kalinoe 2003) and/or breach of contract..

The team was tasked with visiting as many villages along the Ok Tedi and the Fly Rivers as possible under the constraints of time, money and weather. Working on the eve of hurricane season, we were racing against high seas and treacherous landings on the lower Fly. An initial patrol in April traveled from Daru north up to Kiunga. Techa Beaumont, Judy Ribes, Malawa Wong and Simon Warr all traveled from Daru through the estuary region, and then flew to Kiunga to travel briefly through the Middle Fly. The second patrol consisted of Francis Akuani, Christian Dominic, Malawa Wong, Simon Warr and, initially, Nancy Sullivan. This team set out in late May from Kiunga, traveled the Middle Fly, and then set off by boat to Daru. In the end, a total of 33 sites were visited by the two patrols, the majority of which on the Lower Ok Tedi and Middle Fly. The only ones not reached by this project was the direct mine area. We visited three villages in the North Ok Tedi; 7 in the Lower Ok Tedi; 8 in the Middle Fly; 10 in the Lower Fly; and 4 settlements in Daru.

The following communities were visited: Diagun, Ningerum, Mimingre, Sinemarai, Mianmarai, Openai, Bige, Yeran[Ieran], Kawok, Moian, Atkamba, Kiunga, Ereka, Membok, Mipan, Bosset, Wangawanga/Aiambak, Kavianaga Obo, Suki, Sepuka, Doumori, Sui, Sepe, Buria, Gesowa Village, Usumo, Tirere, Sapore 1; and in Daru-- Samari, Mipani, Parama and Sepe Kona.

Overall, our findings are resoundingly pessimistic. We found that very few communities know any of the particulars of these CMCAs, whether as a result of OTML or their own leaders' negligence. Very few benefits have been realized from these agreements as yet, and villagers are cynical about the prospects of much coming in the future. Notwithstanding the informality of our sampling, we found an overwhelming ignorance of these agreements, of the rights villagers currently have regarding the mine, and of their regional development plans. Most distressing perhaps was the general ignorance of environmental and medical risks these communities currently face.

The Yongom people were vehemently against the mine's continuation, largely because they were more fully informed by Robin Moken and other ENECO people (especially in Moian and Kawok, as would be expected). Elsewhere there was remarkably little variation: people were unhappy about the mine's operations and lack of transparency, its lack of communication with the villages and the chronic optimism that leads to false expectations, so-called broken promises and so forth. But the majority of respondents did not want to see the mine close, for fear that OTML would roll up their community development projects and disappear. They wished to be compensated, to be given the development projects they had been promised, and allowed the opportunity to petition for more. One might expect that the more educated the respondents the more environmentally savvy they would be, and thus more demanding of OTML in its clean-up measures. But the damage has gone beyond the level where only the educated would be alarmed. Mothers, young people and community leaders alike all begged to be told the chemical dangers to them right now, what the risks will be to the mine staying open, and how these risks may compound over time. What are the options and how will they have to 'pay' for them? In a province where government

infrastructure does not exist, where the only real health and educational services are provided by Missions, OTML represents the only option to landowners at large-scale development of any kind. Naturally people want it to stay, and to respond to their needs. They want to ore to be as inexhaustible as their needs. But this does not preclude their desire to live healthy lives. There is simply no precedent, no comparable situation, for the landowners to assay this 'environmental damage.' Will it recover? Should they move inland? If so, why hasn't the company informed them?

The Western Province is the least developed of PNG's provinces. The provincial government has long been a refuge for scoundrels (present Members disclosed) and a vacuum for all the revenues from OTML. Like many resource developers, OTML initially refused to act as a government substitute, or to be held responsible for government corruption. But the waste was simply too egregious, and the company had to pick up the slack. And yet there remains a great difference between the affected communities in the Fly and Ok Tedi, and those landowner communities in the shadow of Porgera Joint Venture—where tuffi tanks, four wheel drives and gen-sets all bear the PJV stamp. Given the fact that the Ok Tedi impact communities are under the wing of one of the country's largest development projects, and there is by far more environmental damage to be seen than material development in any one of them--this says a lot about how unconstrained OTML's operations have been. It speaks to the enormous waste of money and effort that has been spent, creating a disaster of such overwhelming proportions that, like the aftermath of a famine or a tsunami, millions more must be sunk into the disaster before it even reaches the level where 'development' may begin.

Both the company and the stakeholders have all signed their own Faustian contracts. It is indeed beyond the means of any company to meet the real costs of this social and ecological disaster. And it is beyond the means of the PNG Government to take an ethical position at this stage. But it is not beyond the company or the government to inform the affected communities of the real dangers they face and the actual human costs they can be expected to pay with each of the various mine continuation/closure options.

At this point it is less about culpability than safety. These impact communities are all victims of a corporate disaster and continue to be victims of a silence that would minimize company culpability. But the real question seems to be how these victims can safeguard their health and livelihoods from now on.

There are logistical difficulties to communicating with these villages, and to distributing the materials pledged by the agreements. For the last year the MS Rankin, owned by Tony Collins, has been plying the Fly River with OTML-contracted health workers and construction personnel, delivering some of these materials to the village. While Collins could not, in conversation, confirm or deny whether some of these workers have also conducted CMCA awareness programs, he does say that OTML is struggling to deliver these materials as promised by the CMCA's. In his opinion they are genuinely working to comply with the terms. The MS Rankin is not the only vessel contracted to distribute supplies either, (the MV Golden Dawn was at one point contracted to do so), and other smaller boats can also be seen running transport and rubber by OTML in behalf of the villages. There is simply more work than there are boats available to accomplish it, Collins says. The company, however, does not wish to enter the shipping business and therefore has not stepped up to bring in their own vessels. As of late June, OTML had 60 containers of materials waiting in Kiunga to be distributed and no way to do so. Collins feels that OTML is trying very hard to distribute the goods, and that there are company-based bureaucratic obstacles at fault: monies are always delayed, he explains, shuttling through departments.

The easiest answer seems to be that OTML has consciously decided to avoid regular or sustained contact with these communities in the belief (perhaps) that too much information will lead to too many demands. Unfortunately, while there is some validity to this in all corporate negotiations, the alternative in PNG is a kind of isolation that breeds more antagonism and contention than necessary. A library of anthropology has already been published on Ok Tedi, and virtually all of it shares the assertion that neglect is the first and most serious complaint of the affected communities. Listen to us; believe us; help us understand. Villagers have been saying this to OTML for 21 years now. And to this date, OTML has consistently responded in patronizing terms, whether this be in legalese, corporate-speak or the arrogance of silence. There appears to be a tacit assumption that the only way OTML can deal with communities is as voiceless pawns in the boardroom.

What is 'best practice' for OTML at this point? The company continually asserts that villagers along the Ok Tedi and Fly Rivers will be more adversely affected by mine closure than by the devatation of social, material and ecological well-being they now face. The following passage from Inmet Mining's web page is a good expression of this (emphasis added):

Changing people's lives

Some 50 000 people live along the Ok Tedi-Fly River system. Sediment from the mine has reduced the amount of fish in the Ok Tedi and Middle Fly Rivers by 80%. Changes to the river-bed have increased flow rates in the river, producing dangerous rapids – a major hazard for locals whose main form of transport is a canoe. The thick mud that blankets the river banks in many places has destroyed the traditional gardens. This mud also makes it difficult to get down to the river to collect drinking water, bathe and fish. **However, along with this hardship has come prosperity for many people. Health care and education have improved enormously and many local businesses have started.**

Social benefits are presented in inverse proportion to environmental ones. Social risks—meaning the 'costs' of mine closure-- are also in direct inverse proportion to environmental ones. For some reason the OTML literature and press releases presents this equation as fair, natural, and supportable, not to mention 'sustainable.' The assumption is that Western Province landowners can trade their old lives for new ones with OTML, and that once they're on that route, turning back is more dangerous than not.

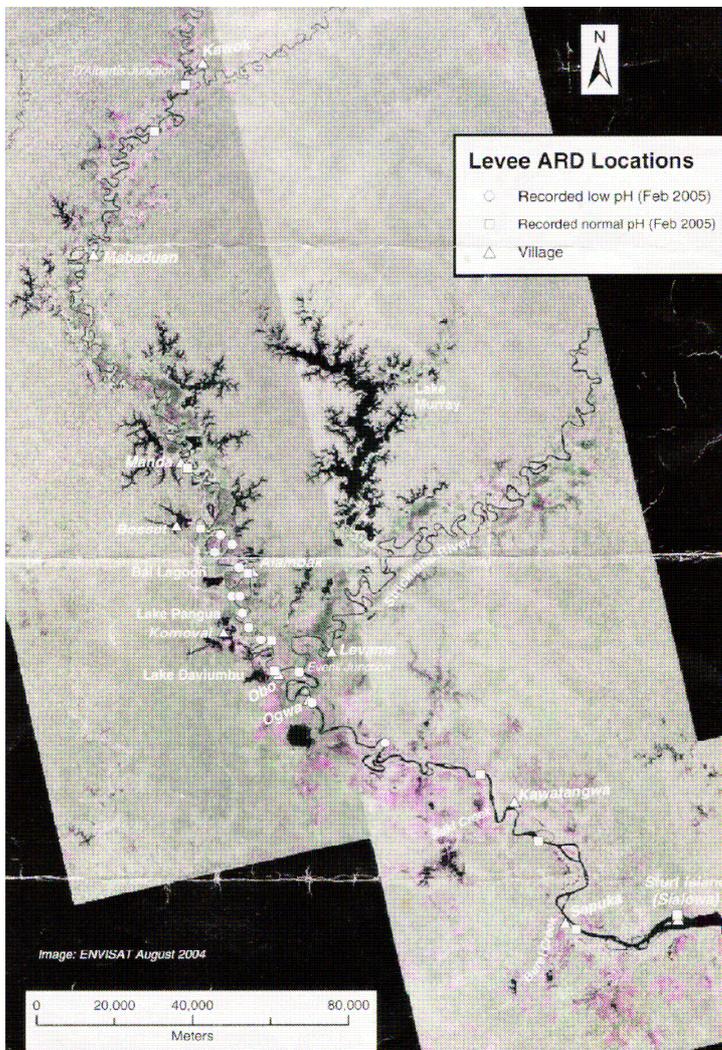
It is by presuming great social benefits (and their converse—the terrible social costs), that the company can justify belt-tightening and not view it as flagrant profiteering. But if the social benefits have been challenged over and over again, as they have been, then the projections of social disarray (the crime, domestic abuse, medical and educational neglect) are in no way certain. After all, this disarray contrasts to what?

OTML May 2005 Komuniti Nius

'Information on patches of dead grass and bare areas in Middle Fly'

...We are visiting communities in the Middle Fly River region above Everill Junction to talk to people about what we have seen and to find out what they have seen themselves, so we can understand better what is happening. Ok Tedi environment officers have seen patches of dead grass and bare areas on river banks between Manda and Everill Junction and some places below Everill Junction.

The process that we think is happening on the river banks is called acid rock drainage (ARD). ARD can happen when sediment that has sulphur minerals, called pyrite, has contact with the air. Along the river banks it is mostly kept wet and doesn't have contact with the air for long....We do not believe there is a risk to the people's health or food and water resources as the affected areas are on the outer edges of the levee banks. Nor does having ARD necessarily mean there will be a big impact on the environment. We need to understand better what is happening here before we can predict what might happen in the future.



OTML Komuniti Nius May 2005 p.3: ARD sitings by company scientists

The better life on the Ok Tedi and Fly Rivers has never come. Social stress, environmental degradation, health and dietary compromises, political factionalism, corruption, hunger, and a genuine fear for the future have become both the risks and the rewards of living downstream from the mine. For every tonne of copper OTML produces they drop ½ tonne in the river system. But now a virtual blackout exists on research produced by the company. If there is, as there now seems to be, a ban placed on reporting all company scientific findings, then this not only violates the agreement but violates the spirit of transparency professed by the agreement. The May 2005 OTML Komuniti Nius reports acid rock drainage as a recent and inconclusive phenomenon, when in fact ARD has been known by OTML scientists for years (or at least since the Peer Review Group reported it in 1997).

But it is precisely this delay, and the evasive tone that accompanies it, that serves to compound the dangers on the ground. Its implicit message is that there is no need for precautionary or redressive action to be taken. Behave normally, villagers are being told—which is more or less what they've been assured as OTML officers pulled away from the shore (bottled water in hand) for the past 21 years. Not to worry—"We do not believe there is a risk to people's health" is what the 2005 Komuniti Nius says. And by thus divesting themselves of malicious intent or even responsibility, OTML also proscribes any cautious measures that might be taken—like not drinking or washing with river water and setting traps rather than standing with nets in the water to catch prawns. Perhaps there are herbal treatments for the skin problems erupting all over these villages; others might consider wearing gloves and boots for certain activities, or taking dietary precautions during pregnancy. Some might be better off moving inland, or raising pigs rather than fishing—transitions that require considerable forethought and planning. OTML could very easily tell impact communities, for example, not to eat catfish or some other species that tests for extreme levels of metal. If to do so is to establish culpability, then *not* to do so simply confirms bad faith. And yet if Helen Rosenbaum's ecological study of the Torres Straits confirms that mine wastes have already had an impact on the environment outside and below the Fly Delta, then the company's refusal to include the Lower Fly in any full settlement as part of the 'impact' zone becomes more like an act of passive-aggression.

Tony Collins of the MS Rankin believes the channel blockages that have been the bane of the Lower Fly are not the result, as so many landowners believe, of cumulative mine sediment, as they are the result of natural changes in the river's course. The latest shipping charts, for example, date from 1993, and are unreliable for the entire delta region.

Ethics update BHP's view of Ok Tedi

By Jane Williams

The Age

July 16, 2004

BHP Billiton chief executive Chip Goodyear said yesterday the controversial Ok Tedi mine in Papua New Guinea would not have been developed under the company charter the group works by today.

Speaking at a global business ethics conference in Melbourne, Mr Goodyear said companies with poor track records in health, safety, environmental responsibility and sustainable development would have trouble getting licences to operate in the future.

BHP Billiton's charter, adopted during the merger between BHP and Billiton plc in 2001, states that the company must earn the trust of employees, customers, suppliers, communities and shareholders.

"Companies with a poor track record in these areas will find it harder to gain regulatory approvals and community support for new developments in the future," Mr Goodyear said.

Included in the charter was a document in which BHP Billiton said it would no longer proceed with development in which tailings from the milling process were dumped into rivers.

Methodology



Our team used a version of rapid rural appraisal to collect data on the second and longer field patrol. All participants were armed with a smattering of background written materials before they entered the field, and continued to read a batch of documents during their trip. The RRA method was chosen as the most appropriate and efficient means of collecting the required data within the established time frame. It is a flexible, informal approach that relies heavily on ethnographic data analysis and yet uses a simple iterative toolkit that can be mastered by all team members. We relied primarily on the semi-structured interviewing of groups and individuals, including informal discussions with villagers. We decided that the suggested survey questions were too many to effectively capture enough details from a wide selection of informants, so we set out with an abbreviated version of the original set of questions. It must be said up front, however, that nowhere did we follow these questions comprehensively, preferring instead to conduct interest group meetings and gather collective responses to a few key questions. Time and logistics had much to do with these decisions. We wanted to get to as many locations as possible before the river became unnavigable in the wet season, which is precisely what happened as we drew closer to the Fly estuary. Observations, anecdotal evidence and written materials were also collected.



In each village or settlement, participants were interviewed as a collective, and then separately, by gender. Sometimes, simply because the team was small, male interviewers would interview the women, but most often female team members would speak to groups to women and children. Both individual and collective views were recorded in these settings. Some detail has been cut from the transcribed interviews, about language and marital customs for example—not because these are superfluous to the report, but because they may be found in previous (more consistent

and comprehensive) reports.¹ We focused on recent data and information related to the CMCA signing.

The team was also conscious of documenting a number of basics, as instructed by MPI:

- The perceptions of the men and women within the sample communities as to whether they believe the process employed by OTML informed them of the workings, requirement, implications and consequences of the Community Mine Continuation Agreements.
- The internal process by which the CMCA's were consented to and signed by village representatives
- The level of understanding of and consent by women and men to undertakings in the Community Mine Continuation Agreements (CMCA's);
- The repercussions of the CMCA's on the social life of the villages
- The process by which the Ok Tedi Development Foundation Regional Development Plans were formulated (who was involved and how?). How many regions have development plans in place and how many women and men know of them?
- The extent to which the Ok Tedi Development Foundation Regional Development Plans address priority issues of village women and men
- The status of delivery of benefits and services outlined in the Ok Tedi Development Foundation Regional Development Plans
- The priority needs of villages as identified by women and men in those communities
- The aspirations and concerns of women and men regarding the mine's continuation, the delivery of benefits and services under the CMCA's and other agreements
- Processes, support and capacity building that would facilitate the effective participation of women and men in the review of the CMCA's and further decision on mine continuation.
- Up-to-date information on the impacts of the Ok Tedi mine in villages that are acknowledged by OTML as affected as well as potentially in villages that the company has still not recognized as impacted including
 - Evidence of acid mine drainage in particular regions of the Ok Tedi and Fly River, and community knowledge or understanding of this issue (unconventional fish kills, etc)
 - Number of times that people have had to move their village, inundation of villages certain times of the year

Pursuant to this last item, the team collected water samples along the rivers where they perceived or had been alerted to possible acid rock drainage. Originally, it was assumed EcoSeeds in Daru might be able to conduct tests on these samples, but it was later determined that their equipment would be insufficient, and that the budget would not support the tests anyway. Nevertheless, the sampling locations and their frequency with which it was pointed out to the team.

Water samples were taken from:

2.6.05 Sonam Creek (between 54 km and 55 km, Meremg [Mimengen]? Village)—oil spillage from big truck tank, copper pipeline breakage spillage

4.6.05 Near Avi River (Kwepe [Kwiapae]village) ARD Bige dredging area B

6.605 Alice River Atkamba Village

¹ See, for example, Jackson 1998 for 1997(?) data collected on Atkamba, Bige, Jopani, Ieran, Kawok and Senamrai; Kirsch 1993 for Kawok, Ereka, Membok Moian and Atkamba villages in 1993; Katut 2005a for Ningerum in 2004; and Lawrence 1995 for the Kiwai area.

7.6.05 Membok River
7.6.05 Concord Pacific Logging Binge (?) River
8.6.05 Mipan Village
Aku River (joins with Fly) from Mipan to Manda
Manda Village
Bosset Creek
Bosset Village

It should be noted, however, that as the team moved closer to Daru, and especially from Mipan south, the seasonal high waves and wind became a growing impediment to their progress. After quickening their pace to ensure arriving at Daru safely, they were forced by dangerous conditions to forego landing at Aduru, Sepe and Tirere.



OTML cyanide drums in Kiunga, destined to be water drums in river villages

In this write-up we have listed each village visited on either the first or second patrol in 2005, and then provided excerpts from 1) the most recent previous baseline survey, 2) Techa's field notes from April 05, and 3) data and interview transcriptions from the June 05 patrol. In this way, we hope to present the changes that have/have not most recently occurred, and whatever response variety we collected.

Terms of Reference

for Nancy Sullivan and Associates:

Rapid Appraisal of the Perceptions, Aspirations and Circumstances of Communities impacted by the Ok Tedi Mining Operations

I. Purpose:

The Rapid Appraisal of the Perceptions, Aspirations and Circumstances of Communities impacted by the Ok Tedi Mining Operations (hereafter 'the survey;') is intended to provide a valuable source of independent information on the status of the communities living along the Fly River impact zone of the Ok Tedi mine. Due to the isolation of these communities, very little information, and virtually no independent information on the needs, perceptions or concerns of these communities is made available at the local, provincial, national or international level. Similarly the level of information or misinformation within these communities regarding the arrangements for the continuation of the mine is not clear. Without independent information and verification of the situation along the Ok Tedi and Fly rivers it is extremely difficult for decision makers and leaders to make decisions that serve their constituents, and meet their most pressing or urgent needs.

The survey is intended for a public audience, but importantly to assist the affected communities in future decision making regarding the mine.

II. Objectives:

Survey

- A. The survey is to be undertaken to provide a rapid appraisal of the impacts (costs and benefits) of the Ok Tedi mine on communities within the impact zone and gather data regarding the pressing concerns and needs of the communities affected by the Ok Tedi mine.
1. This data will be analyzed and presented in a form that will be accessible to the members of these communities, with recommendations aimed to assist future decision making
 2. Discussions at the Kiunga Summit (to be held in Sept /Oct 2004) will also be organized to present and discuss the findings and recommendations of the survey to community representatives. The survey will also assist in planning the issues that need to be discussed and on which community representatives could benefit from resourcing for the summit.
 3. Finally, the data will also be used to inform the wider national and international community about the current state of affairs of communities in the impact zone of the Ok Tedi mine.

Consultation for the Kiunga Summit:

- A. The survey team is also to consult communities regarding the proposal for the Kiunga summit, including:
- i. Finalise an appropriate process to select and identify participants to the summit who will be able to engage and discuss the issues and return to their communities with relevant information with which to brief their communities
 - ii. Develop in consultation a process to notify communities of the exact date of the summit and the most appropriate means of transporting participants to Kiunga for the summit
 - iii. identify and prioritise issues that should be covered in the discussions at the summit

III. Methods:

- B. This survey has practical aims. It is intended to produce information that will help to address the needs and concerns of the communities affected by the mine.
- C. Because of the very large geographic area and the large numbers of people (approximately 34,000) affected by the mine, interviews will only be carried out in a sample of the villages. The sample villages will be practically selected during the course of the survey patrol.
1. The survey will include several villages from each of the major cultural-linguistic group in the impact zone (Ningerum, Awin, Yonggom, Marind-speakers (including Boazi), Suki, Gogodala, Kiwai).
 2. The survey will also include a sample of villages from each of the major eco-systems (from north to south: foothills and lowland rain forest of the North Fly; savannah grasslands of the Middle Fly; swampy lowlands, lagoons, and mangrove/coastal/delta areas of the South Fly).
 3. Because the sample of villages will not be randomly selected in advance, the study will not produce data that can be subjected to statistical analysis.

- D. The survey is proposed to use a combination of structured and unstructured interview techniques. The final process will be agreed upon with in discussion with Nancy Sullivan and Associates.

IV. Output:

1. Presentation of an independent report, based on a sample of communities representing each main cultural grouping and impact zones in the known affected areas of the Western Province. The particular terms of reference or priority research objectives which this report addresses are outlined in the Appendix I and II

2. Inform communities about the summit planned as a forum in which people from the communities can discuss findings of the survey, and identify participants to the Kiunga summit who will attend to discuss findings, and take these findings and other information back to their communities.

Appendix I

1. Issues identified in the patrol as research priorities for the survey:

Broad issues to be addressed in the survey:

These broad issues were identified in the debriefing as priorities to explore in the survey and should be integrated into the overall survey design and focus.

- Common problems touching the people:
 - Extent of the damage/ environmental impacts
 - CMCA: are they working
 - The mine and its impacts, including social and economic issues
- Concerns and needs of the people:
 - People want something sustainable, to what extent is the mine's 'benefits' provide people with something sustainable
 - Information they do and don't have
 - empowerment and self reliance
 - their future: what are their main concerns about the future
 - environmental damage: what are the primary issues that will affect people (water shortages, acid mine drainage, flooding etc)
 - survival- food, water and immediate needs
 - education and health
- Environmental damage:
 - has the mine created a situation where people rely on the compensation for survival in some areas because of the extent of the environmental destruction?
- Ok Tedi Compensation
 - What are the benefits from the mine? What are the costs?
 - To what extent is the mine addressing people's needs?
 - To what extent is the mine focussing on wants rather than needs.
 - Are the CMCA villages actually any better off than non CMCA villages
- Potential for or existence of cultural genocide/ environmental genocide: will people be forced out of their land and what are the economic, cultural and social implications of this
- Future
 - What people know or don't know and what they should know
 - What they want to do next regarding the mine, what they need to be able to decide what to do next
- Sustainability: what is the sustainability of the projects being implemented, positive and negative aspects of the 'benefits' provided to the communities.

- CMCA issues
 - context of signing and cultural appropriateness of the signing
 - what they know and don't know, and do they have a copy?
 - where are the communities now, are they happy to be operating under the CMCA's, do they want in or out of the CMCA's?
 - CMCA's benefits vs the impacts (river dying/ loss of land)
 - Are the CMCA's delivering what was expected or agreed to by communities
- Opening people's thinking: what can they do?

Other Aspects of Survey Patrol:

- Dissemination of information identified as priorities in initial patrol and discussions with WP groups and in particular
 - Provision of basic CMCA info to communities:
 - Information on environmental issues identified and requested in the patrol by communities
 - information relevant to the meeting that will happen this year on environmental predictions that were worse than expected, and also on the CMCA review process that is planned by the company.



Techa and Sila in Daru

Introduction

Western Province is PNG's largest province, and is comprised of North Fly, Middle Fly and South Fly Districts. All of these have been in some way affected by the Ok Tedi gold/copper mine at Mt. Fubilan in the central mountain range on the Ok Tedi River north of the Fly River. The mining of Mt. Fubilan has occurred as a three stage process: the mining and processing of the gold enriched cap from 1984 to 1986, the extraction of both gold and copper from the copper rich base from 1986 to 1988 and the extraction of largely copper (with small quantities of gold and silver) from 1988 to the present.

Excerpted from www.inmetmining.com

What can the people of the Ok Tedi and Fly Rivers expect

The mine is due to close in 2010. The Papua New Guinea Sustainable Development Program Company currently receives dividends of millions of dollars. Two thirds of this revenue is invested in a long-term fund (that will enable the company to contribute for at least four decades after the mine closes). The remaining third is spent on current development projects in the Western Province (home of the mine) and other areas in PNG. It is too early to tell whether the fund will be able to successfully address the continuing environmental damage or achieve significant sustainable development and job creation. If not, the legacy of 30 years of mining in the clouds may be lasting environmental damage and cultural dislocation

Taking into account the impacts of the mine, a World Bank report commissioned by the then-Prime Minister of Papua New Guinea recommended the early closure of the Ok Tedi mine once programs to facilitate the social and economic transition are implemented (The World Bank, 2000).

The World Bank report on the Risk Assessment (WB 2000:p2):

From 1984 until the end of 1998, the average rate of discharge of tailings and waste rock into the river was 65 million tonnes per annum...The waste rock particles are predominantly larger sized gravel material and boulders but much of this abrades over time to form finer and more readily transported material. The tailings material and the abrasion products of the waste rock are being deposited in the Fly River system including the Ok Mani and the Ok Tedi and are significantly affecting the hydrology of the system mainly by raising the bed level of the Ok Tedi and Fly Rivers. Aggradation and/or high suspended sediment loads-have produced physical impacts in the form of loss of fish habitat, reduced fish populations and dieback of vegetation on the floodplains. The tailings and the waste rock also contain copper, other heavy metals and diverse sulphide minerals which have the potential to register adverse chemical and biological effects on living things.

Nevertheless, OTML has always resisted the building of a tailings dam on the basis of its cost. The first dam constructed was destroyed by a landslide in 1984 and has never been rebuilt. Instead, the company has spent the last 20 years discharging an average of 165 000 tonnes of tailings and waste rock per day into the Ok Tedi and Fly Rivers.



Cynaide drums are used for water caching along the Fly

The effects of this discharge were immediate, continue to be recorded, and promise to unfold for at least another fifty years along these rivers. Environmentalists and OTML scientists alike have called the environmental impacts of the mine disastrous. Cumulative effects include the rise of sediment causing flooding, and loss of rainforest from chemical wastes all along the rivers. The social impacts have been no less dramatic and well documented by anthropologists, geographers and environmentalists. The rapid introduction of wage labour, a cash economy, and new forms of authority have combined with the destruction of local subsistence economies to create some of the most depressed and vulnerable communities in PNG. Whether this is measured by domestic violence, health, economic opportunity, education or any other external indicator, the social costs have been enormous. But most remarkably, the Western Province has also been host to a number of prominent social scientists (Barth, Burton, Busse, Hyndman, Jackson, Jorgensen, King, Kirsch for examples) whose work both predates and coincides with the life of the mine, giving the general public some of the most comprehensive pictures of radical sociocultural change in the late twentieth century. Unavoidably, most (but not all—notable Filer) of these scholars have become

advocates for their host communities who now endure the impact of OTML, working either for environmental organizations or making their voices heard in academic circles. If OTML ever did imagine they were opening a mine in *terra nullis* (see Burton 1997), they have long been informed otherwise. Indeed, Ok Tedi must, by now, be one of the most well-documented resource projects in the world—geologically, ecologically, economically and socially.

PNG Resources Issue 2 2005 p55:

Extra Mine Life Option Looking Good for Ok Tedi

Ok Tedi Ltd (OTML) has confirmed that it is proposing to extend the mine life of Ok Tedi. In its recently published 2004 Annual Review, OTML says that a review of mine plans and reserves envisages an increase in mine life from 2010 to 2012.

As a result of the mine's devastating impacts, approximately 30,000 landowners took BHP to court in Australia in 1994. By 1996, the company had settled out of court, pledging to pay compensation for damages and reduce the environmental impacts of the mine with some form of tailings containment. This was received by landowners as a great victory, and allowed communities along both the Ok Tedi and the Fly River to express a sigh of relief—momentarily.

But the waste continued to be discharged directly into the river. A dredge was installed at the lower Ok Tedi, but this has always been a compromise solution, removing less than one quarter of the sediment released (Ok Tedi Mining, 2003).

Landowners went back to the Victorian Supreme Court in 2000. Facing charges of breach of settlement terms, OTML and BHP Billiton offered landowners compensation in return for their ability to take the company to court on any future damages. In effect, these agreements allow the mine to continue to dump waste of dangerous proportions in return for compensatory development materials and projects, plus small amounts of cash. (What they didn't do was bind the company to any environmental clean-up.) And because the company had been so unresponsive to community suffering and claims in the past, community leaders faced an impossible choice: either risk being ignored forever, and possibly enduring another long court battle the outcome of which could not be guaranteed, or claim some material compensation at present. Most community leaders signed. But it was immediately clear that, despite company claims of a thorough awareness campaign with affected communities, few if any of these community representatives actually knew what they were signing. There is some question, in fact, as to whether they even read the full CMCA itself. This remains the basis of a potential third court case, the very absence of informed consent behind the signing of these agreements.

In 2003 the Dean of the University of Papua New Guinea Law School, Lawrence Kalinoe, produced a legal critique of these agreements (see the Appendices). The Kalinoe report (2003) finds that the agreements were "a legal device to lock in and keep the affected communities from pursuing individual or separate lawsuits for environmental damage and resultant loss and nuisance.. to control and minimize the extent of liability to levels it knows it can afford... not to reflect a fair or equitable value for damage" Sir Michael Somare advanced a constitutional challenge of the legislation following from these agreements in 2004, but unfortunately abandoned it soon afterwards. OTML offered the landowners another settlement in January 2004, which in effect reiterated the previous offer: the landowners give up their right to sue the company, and they receive, in turn, compensation. Those communities with enough information or organization to do so, resisted signing in favor of the possibility of a further court case. Others, once again, conceded.

Basic Legal History: Outline of the Main Ok Tedi Legal Situations

1994

Ok Tedi 1: A legal case brought in Australia by landowners charged the company with negligence and sought remedies including damages and an end to the destruction of the resources of communities living downstream of the river by dumping of waste into the Ok Tedi and Fly River systems.

1996

Settlement no 1: In 1996 a settlement of 'Ok Tedi 1' the original court case occurred. Communities received compensation totaling \$140 million in total, and an agreement from the company to implement a viable tailings disposal method to keep the waste from entering the river.

1999

Ok Tedi 2: A second court case brought in Australia alleged a breach of the original settlement agreement was undertaken in 2000, when after 3 years the mine was still dumping its tailings into the river, and claimed that a dredging operation part way down the river was the only viable way of reducing the waste going into the river.

2000

CMCA's : Community Mine Continuation Agreements. A process was undertaken to bind local communities to agree to the ongoing operation of the mine and to limit the mine's obligation to pay them damages. A few people signed these agreements for the majority of the villages under very controversial circumstances. The CMCA's form an aspect of the PNG legislation, the "Ok Tedi Ninth Supplemental Agreement"

Ok Tedi Ninth Supplemental Agreement: The PNG government and BHP, the Australian company managing the mine brokered a deal to allow BHP to exit the mining operation and legitimized the removal of people's rights that occurred in the CMCA's through a piece of government legislation.

2004

Settlement no 2: A settlement of the Ok Tedi 2 case in 2004. Very few efforts were made to explain to those who remained in the court case why it had been settled, and it is likely there still remains a lot of confusion over this issue. The primary plaintiff representing the case complains that he felt pressured by his lawyers to settle.

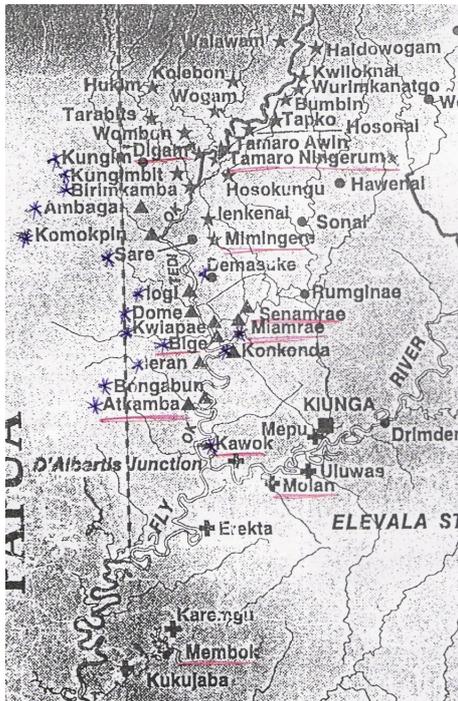


With Alex Maun at Derian Ltd., Kaspia in Kiunga

Village interviews

The North Fly District's estimated rural population in the year 2000 was 35000. A West Papuan reguugee camp, EARRA, was established in 1988 and had a 1994 population of population of 3500. Incomes are low on the hills and plains between Ningerum and Kiunga and are derived from the sale of fresh food, betel nut, rubber and crocodile skins. All other people in the district earn verylow incomes from minor sales of fresh food. The Ok Tedi mine provides various sources of income to people in the west of the district. Those in the mmediate Tabubil area receive income from royalties and wage employment, while many of theOk speaking people who live in the mountains north of Tabubil receive remittances from relatives working at the mine. More recently the people along the Ok Tedi and Fly rivers below the mine site have received compensation payments. North of Ningerum, people earn very low incomes, while those southof Ningerum live in low potential environments.Overall, people in North Fly District are extremely disadvantaged relative to people in other districtsof PNG. (RSPAS 2001:35)

In the Upper Fly, the Yonggom villages are split between the Ningerum and Kiunga Local Government Councils. The Yonggom are part of a much larger cultural-linguistic group which extends westward across the border into Irian Jaya, where they are known as the Muyu. During the border crossing of 1984 roughly five thousand of the refugees from Irian Jaya that came into Papua New Guinea are Muyu (Kirsch 1989). The combined 1991 population of the two groups was more than 15,000 (Kirsch 1991:2).



Digam Village

Mark Kahauk- Ward 7 member, says people in 1984 (the elders) asked the Ok Tedi officers what chemicals they would use and the officers never identified what chemicals they would use. 'Please can you help identify the chemicals that they have used and dumped into the river system?' Digam did not sign the CMCA and were not beneficiary to it; they don't want to sign the CMCA. Under the Ok Tedi trust program the company has built a community hall and water tank. The impacts in Digam are the same as those experienced down stream on the Alice/ Ok Tedi River. They are seeing people dying with diseases not experienced before; their land is being contaminated by the poisons; they do not know how bad it is but they are right near the mine. There is not as much impact as for the people downstream but they believe their lives are being threatened, who knows, maybe their food is contaminated. Sediments building up in the river banks, mud everywhere on the river bank. They will not sign or be involved in the CMCA agreement; they want to protect their land. From day one ther Digam community have not benefited from the mine.

They are experiencing sores and itching when they walk on sediments and mud on the river banks, and when they scratch, ulcers develop. Some people have lost their whole feet. Gravel used for roads from Kiunga to Tabubil was taken from the Alice River, they believe it contains some of the poisons, and so the dust, when the traffic passes, goes to the gardens and streams they use for drinking, maybe causing asthma. They don't know what is the situation, there has been no proper research or information given to them so they don't know.

A Corrections Services Institute officer from Digam said the mine has to be stopped because they have not benefited, nothing good has been done. 'We must repeal all of the agreements necessary, mining is cheating us, we are all affected. When are they building a dam? If they are not building a dam, then close the mine!' The impression is that they want the mine to stop, but Ok Tedi and the government must clean up the mess, too. They have formed a group called the Ningerum West Pressure Association, the Ningerum West Pressure Group. Mr Conrad Buka is the Chairman. He asks Can we help them identify the chemicals?



Sores in Ningerum

Ningerum Village

The Ningerum Settlement was started in 1964 when the ECP missionaries and then the Government officers came to set up their headquarters there for the District, and when the ECP missionaries came. From that time people from the nearbyYongom villages have migrated to Nigrum to live and look for work. The Settlement was once located in the area where now the

Ningerum High School stands. As the school is now expanding, the settlements have been relocated and are now situated near the Alice River by the bank. Their village councillor is Mr. Kawuk .The closest town is Babubil and Kiunga, and their transport is canoe and car. Their approximate population size is 3900+.

With regards to seasonal flooding, the settlement is often flooded especially during the rainy period/season. The landowning people of the current settlement are the Awin. The current estimated population in the Ningerum settlement is about 900+ people. No canoes with outboard motors. No trade stores in operation. There are many high school graduates and grade ten leavers now living in the village, both male and female. No people having roofing/permanent housing. There no two way radios and or tanks. The main churches are Catholic, SDA, United Church, AOG (Assembly of God), CLC, ELC (Evangelical Lutheran Church). The main staple food is sago and fish.

APPENDIX 4				
2000 NATIONAL POPULATION CENSUS DATA - WEST NINGERUM AREA				
Ningerum Rural LLG				
Census Geographical Area	Households	Persons	Males	Females
01. Ambaga Ward	83	474	248	226
001. Ambaga	43	249	129	120
002. Binikamba	10	57	32	25
003. Kungambit	21	124	64	60
004. Karandimok	9	44	23	21
02. Kungim Ward	105	591	277	314
003. Kungim	105	591	277	314
03. Tengkim Ward	85	398	192	206
004. Sikim	20	104	49	55
010. Digam	16	87	32	35
024. Tengkim	30	133	67	66
028. Wombon	19	94	44	50
04. Hukim Ward	83	387	207	180
013. Hukim	62	236	127	109
018. Minipon	21	151	80	71
05. Tarakbits Ward	96	561	292	269
005. Binkawok	23	176	85	91
006. Betenok	26	135	67	68
023. Tarakbits	47	250	140	110
06. Ogun Ward	83	530	268	262
003. Binkim No.2	35	209	117	92
004. Ogun	48	321	151	170
07. Kwikim Ward	96	476	258	218
001. Ambre /Ok tarim	17	107	56	51
017. Kwikim	46	212	117	95
018. Swobon	33	157	85	72
08. Binkim No. 1 Ward	72	308	163	145
002. Binkim No. 1	13	52	26	26
007. Bulpkawok	16	71	36	33
009. Derongo	19	80	44	36
011. Duonbonkim	11	46	23	23
031. Yongtau No.1	13	59	32	27
TOTALS:	2,572	13,366	6,811	6,555

Ningerum population counts (Katut 2005a)

Women’s views at the Ningerum Settlement:

The water from the Oktrim that comes down from the Alice is contaminated with copper. Food gardens such as banana, taro, kaukau, are no longer lasting, they go rotten very quickly. Many of the foodstuffs are not as plentiful as before. They are ‘malnourished.’ The women say that the foods they used to eat have no taste now. Many times during the heavy rain period and dry season there are shortages of food. They said that sago is their main food that they eat every day with

fish and prawns which they catch from the river and small creeks. But most of the time they say they don't have enough protein, as the fish have decreased in number. Most of the time they depend on their husbands, brothers, and fathers to hunt wild pigs and other wild animals, but this is not often. So most of the time they eat greens, mainly tulip, aibika and bush ferns with their sago. There's not much fruit but they do grow peanuts.



Ningerum people gold panning on the Alice River

In terms of earning a little income for their basic needs, the women most of the time sell their produce at the roadside, the Kiunga-Tabubil Highway. They mainly sell aibika which they grow near their house and in the nearby gardens. The income or amount they usually get from the roadside market ranges from K5-K20 depending on how much they sell. As they live in the settlement they don't have any cash crops or other produce to sell.

The most common sickness the women see is asthma which is common with children, adults and also old people. Anemia- 'shortage of blood' is another sick that is second to asthma, and which is common among women and children as well as men. The other diseases among the people there are the many small sores on their skin, especially on their legs. This is because many of them often stand in the water whole day panning for dust gold in the sediments at the Alice River. Their skin become itchy and they scratch themselves until small sores appear. Many of the people there, especially women and small children, stand all day in the River panning for gold. These little sores don't have any treatment.

Many of the women interviewed stated that they know that they have chemicals in their body from the Mine's waste dumped into the River. This is obvious to them because when a person dies the body becomes rotten (sting) much more quickly these days, within only a day. Most of the women are concerned about their environment and the River because it is now already damaged with sediments and is contaminated with copper and other chemicals. The color of the water has changed to black and milky. The only way they get money is through gold dust which they usually pan from the sediment. The amount they get ranges from K70--100 depending on how much one collects. All day they stand in the River trying to get as much gold dust as possible.

Most of the women interviewed said they do not know what the CMCA is. They know nothing about it. We asked if their husbands or brothers tell them about it and they said their men folk have never told them about it.

Paul Assek has concerns about the company and the government. Why were they both getting reports about the environment and kept saying there would be no social or environmental impact? They were supposed to build a tailings dam. But they didn't build it, so the waste has been going through the Ok Tedi and Fly Rivers and spoiling the systems. His concern is all the problems 'we all the people of the Western Province are facing now.'

We are all affected by the mine because waste goes through the river system and spoils our lives. OTML doesn't want to put these things in the news because they spoiled all the environment and resources. Paul says the doctors know that 'we have many kinds of sicknesses but they don't tell the people in the village.' He says the company told them all not to talk about the sicknesses that are in the area.

In the years before the mine started they didn't face these sicknesses that they are now facing. Their life is the environment, and they now face very big problems with it, for their lifetimes. They're concerned about making gardens and getting garden food to the markets to make money for food and other things. They don't have lots of crops in the province. They only have rubber as their cash crop. Paul's concern is in some other provinces they have lots of cash crops but in their province they don't have all this, and so they're more vulnerable. He's concerned about the generations to come. Their cultures are dying out and they are losing their customs. All the custom stories have been lost and when you ask about them they will tell you they don't know the custom stories anymore. The problems they are facing is all they talk about now. Since 1984 to the present they have gotten nothing out of the company, they haven't benefited from OTML, they are just like stones sitting in the wild while the mine is operating. Paul's idea about these CMCA's is that nothing good has come from them, nothing good will be done either.



Paul Assek, Ningerum

Interview with Conrad Boga, Chairman West Ningerum Pressure Group (taken by Techla Katut):

We the Awim tribe area didn't sign the CMCA because we are afraid we might lose all our resources, environment and life in our future generations. The impacts that the villages along the riverside have reported are the same for us. Our community and area as a whole is with the lawsuit and we still remain the same. Since 1984 to 2005 we haven't benefited, therefore the agreement must be reviewed because the agreement is one sided, in favour of the government and business. OTML must stop mining our minerals because nothing good has been done, we have not benefited, and we've been badly affected. When will they build the dam? If they are not going to build the dam they must close the mine. What chemicals have been used?

The development we received has been the road and the bridge, but it's in the interest of OTML for shifting copper and gold up and down the road.

We do experience domestic abuse, drinking, drug abuse, and youths no longer have respect for our leaders.

We have better schools now like the Ningerum Community and High School, but the fees are very high. Therefore we want the damage to our government and OTML to pay half the school fees and five scholarships.

Since 1984 and the starting of the mine our garden ground along the Alice River side has been effected. We don't have enough garden food for market sales. But we do dish the copper dust along the Ok Tedi, although there are no good markets for selling it.

Economically we are worse than 10 years ago because we don't have enough garden food for marketing, to pay school fees, medicine, or meet our basic needs.

CMCA is a death certificate and we don't want to sign or support it because we really understand the disadvantages of it. We in the Awin tribe are in the law suit and really want to mine to stop and compensate us for the damages caused. We are the West Ningerum Pressure Group and we back up ENECO in their push for a 3rd court case.

The issues we want to address at the Kiunga Summit are:

1. The mine must close
2. OTML must clean up the mess.
3. OTML must compensate us for the environment

In 2001, the West Ningerum Pressure Group/Association (WNPA), comprised of 29 villages (including 4 West Papuan ones), attempted to lay compensation claims against OTML for environmental and social damages to their communities. The immediate response from then-MD of OTML Roger Higgins was succinct and condescending:

Message to the West Ningerum Communities by Dr. Roger Higgins, Former Managing Director of OTML 2nd January 2001

Over the past 3 months, senior managers of Ok Tedi Mining Ltd (including myself) and Government officers from Western Province and Port Moresby have met with the leaders of the West Ningerum Pressure Association. The leaders of the Association have demanded compensation for environmental damage that they claim has occurred in the Ok Tarim and the Ok Birim.

OTML is able to pay compensation ONLY if there is damage that can be clearly seen by everyone. The word "compensation" means a payment to make up for a loss—this is also law in PNG. OTML has tried to work with the leaders of the Association to find out if there is a loss that deserves compensation. National Government officers have also tried to see if there is a loss. Together, we have not been able to show that there is any loss of resources that would allow compensation to be paid. **Everyone should understand that OTML will NOT be paying compensation to the West Ningerum Pressure Association on Thursday 4th January.**

The WNPA then decided on another course of action. In 2002, they asked the Port Moresby-based consulting firm, Ecosystems Management Ltd. (ESM) to conduct a full social and environmental report on the situation. ESM began its investigations in February 2003, under the Principal Investigation of the New Zealand trained Simbu anthropologist, Techla Katut (MA Anthropology, University of Auckland) (married to Paul Katut).

The reports basically conclude that the fish populations on the Ok Tarim and Ok Birim rivers have depleted, and seriously impacted the livelihood and sociocultural integrity of these river communities. The social impact assessment is particularly important, because it reflects the concerns of these communities and their perceptions of the wastes deposited in the Ok Tedi. The argument in both reports is that these villages were once considered not-mine-affected, but are indeed affected by the mine and therefore deserve some compensation. The environmental report is a summary of lab tests run on several fish species as well as measurements and observations on

site. As social scientists, we are not qualified to assess the science of this report, but when OTML hired an independent assessor to comment on it, Dr. Andrew Storey lambasted virtually all its findings. It's much harder to assail qualitative data, and so the criticisms of Dr. Keith Bentley, who was hired to assess it, are sketchier, and more or less restricted to issues of human health. Considering the sneer with which the company responses were formulated, as will be seen in the following items, it is surprising that OTML did not critique Ms. Katut's documentation of social and cultural effects of the Mine. But then, this is the one topic that might be called unassailable by any standard of measure. If people report to be socially impacted by the mine, that perception can itself prove the point. But note the tone and lack of objectivity in the OTML comments below:

Letter from Keith E. Faulkner, MD, OTML 25 February 2005, to Mr. Kuma Aua, Secretary, Department of Mining:

Dear Kuma,

Re: Draft Report—Assessment Report on the impacts of the Ok Tedi Mine on the Ok Tarim/Ok Birim River System

You would recall OTML's review comments last August on a report titled: "Draft Socio-Economic Impact Assessment Report: Alleged Impact of Ok Tedi Mining Operations on the Freshwater Fisheries of Ok Taim/Ok Birtim River System."

I am aware that a subsequent draft report, titled: "Environment Impact Study—Impact of Ok Tedi Mining Operation on Fish Population of Ok Tarim/Ok Birim River" exists. While OTML has not officially received this later report, we have had the opportunity to review it and have significant concerns regarding its accuracy and level of science.

I am also aware that the consultants who compiled the report are aiming to present the findings of this report to the West Ningerum community on or about 3rd March 2005. I would like to suggest that, given the report allegedly implicated OTML, you have the opportunity to read OTML's review comments before any such presentation to the community occurs.

Consequently I have taken the liberty to forward you these review comments...After reading these review comments, it is assumed you will share OTML's concern at the report's gross inaccuracies. The West Ningerum Pressure Group first raised their issues in 2000. Given that the report does not really advance scientific scrutiny on these issues, OTML has offered its own findings within this review which, it is hoped, will assist to gain closure after this long period. ...

(cc: Dr Wari Iamo, Secretary DEC)

Page 12 of the attached comments on the report states:

The EML report, while obviously based on effort and good intention, does not adequately address the issues raised by the West Ningerum Pressure Group (WNPG). Indeed, the lack of science demonstrated in the EML report renders it and its conclusions without value.

[Review on the freshwater fishery by Dr. Andrew Story, and review on metal levels and human health issues by Dr Keith Bentley]

At times, the EML report demonstrates poor research, lack of understanding and absence of editorial vigour. While these aspects do not imbue the reader with confidence, the more important issues relating to the science behind the study leaves the reader at times bewildered. The following quotes from Drs Storey and Bentley demonstrate this:

'...the draft report by Ecosystems Management Ltd...contains many inaccuracies, does not adhere to best-practice scientific protocols, lacks important detail with respect to methods, and makes assumptions and interpretations that are not supported by the data collected...I will not spend time re-detailing all the various inadequacies, but will concentrate on the more pertinent issues that, in my opinion, invalidate many of the conclusions made in this report.'

If the company's community relations were poor before, they were certainly not improved by their handling of this matter. Frustrated villagers, well-intentioned scientists and serious community activists are not the enemy, but they can be made into enemies by patronizing corporate correspondence.

Between Kiunga and Ningerum a rural hospital run by the Catholic Mission in Rumginae offered us the following report of a young woman's serious illness (from 2003) that could not be diagnosed, and from which the patient consequently died. It is interesting to note that whether or not this young woman suffered from chemical poisoning, she exhibited symptoms serious and unusual enough to confound even the most well staffed medical institution available to her. :

15 May 2003

Medical Report for Doris Srom, 19 yr. old female from Kwape village

In summary, we have not yet diagnosed the exact cause of Doris' illness, I suspect she has an infection. It is possible she has an autoimmune disease or cancer or other cause for her symptoms. It is possible that environmental contaminants could account for some of her symptoms though I do not feel it could account for her current condition.

Doris was admitted to Rumginae 11/8/02 to 26/10/02. She presented with hair loss, red face, acting abnormally, facial rash, abdominal and chest pains. After some improvement from TB treatment she was discharged with a diagnosis of presumed tuberculosis of the adrenal gland to complete her treatment at Senamre Aid Post. Her treatment duration was 7 months (shorter than the 9 months recommended on discharge)....

My feeling is that Doris has an infection of some kind. My thoughts include Meliodosis, resistant tuberculosis, deep abscess, multi-resistant Staph aureus, systemic fungal infection or some other unusual tropical infection.

The increased redness of the lips could be found with arsenic toxicity. The peripheral neuropathy could be found with arsenic or lead toxicity. I do, however, find no symptoms or signs to suggest heavy metal poisoning.

For completeness, to exclude heavy metal poisoning it might be possible to measure levels on blood samples (serum), 24 hour urine sample, hair and nail samples.

The most distressing thing is that this young girl is so desperately ill and not responding to any medication that we have tried.

Yours Sincerely,

(signed)

Dr. Daniel Priest
MBBS (Syd) FRACGP DRANZCOG

Mimingre Village

15/ 06/ 05 This is a CMCA signatory community Mimingre village is on the Tabubil -Kiunga highway and is made up of three villages: Mimingre, Sare and Muwing.

Mimingre village has seven clans .

- 1.Sore Mimingire
- 2.Sore Srinkiya
- 3.Beke Kwapnai
- 4.Kumgu Wabrunai
- 5.Kwan Kyakwapnai

- 6.Sotditma
- 7.Mendume

Muwang has five clans

- 1.Sonam Sore
- 2.Greso Temnai
- 3.Kumgu
- 4.Sore Skupnai
- 5.Bek Hove

The three villages forming the Muaing or Awin group of people are Awin language speakers and their dialect is Akom. Their representative in the local level government is Mr. Francis Kaliman, however he lives at Tabubil where he works with the mining company.

Before they were one village Mimingre, but for a number of reasons they split up and became three village. Their approximate population size is one hundred and sixty [160]. Many of them have graduated from grade 10.

The main food eaten is sago and other root crops like bananas, yams, kaukau, aibika and corn. These crops are seasonal so their main food is sago and bananas. They face seasonal problems with food availability. Mining related impacts on food production and diets include vegetables covered with dust, water from creeks destroyed from copper spills making it difficult to fish and making sago, and roadside erosion washed into creeks.

Two people work for wages in the village as elementary school teachers, and 19 people work for wages elsewhere. The people in the village earn money from selling rubber lumps and garden crops.

Marriage patterns: they marry within the clans [today], while before they married their [cross] cousins. They no longer practice initiation rituals; they only practice traditional feasts.

The major environmental impacts from the mine include:

- Land slides wash down into creeks destroying sago and also building sediments in creeks .
- Fish stock depleting
- River deltas no longer fertile
- Erosion, mud covering river banks.

This community signed the CMCA but they have not benefited from the agreement, they say.

Only one house with iron roof no water tanks and only 2 emergency radios.

In the village there are 12 permanent and semi permanent houses, houses with tanks which store 2000 and 1000 litres of rain water.

Main food eaten in the village was sago and also the most important food however there is not enough food to eat and also there's seasonal problems with food availability .

They found copper or lumps grow inside wild animals and domestic animals .

Not many work for wages in the village. Number of people from Mimingre working with the Mining Company: 9 persons

Before we had surplus of food to sell in the market but today only women sell aibika in the market. Most people earn money from panning gold and selling to private gold buyers. A days penning would be a 1grams or 2 grams depending on the deposits it's about K25.per grams. For a weeks penning you would be looking for some 6grams and that would be around some K150. There are no other cash crops to sustain them.

ECPNG church and Catholics there's no conflict or tensions and there's help or aid from Catholic church such as aid post and integral human development [IHD] trainings.

No refugee issues, but they come purposely for educational purposes.

Major environmental impacts from the mining are food gardens destroyed by flood and mud sago palms destroyed their creeks and drinking water destroyed and their fish depleting fast . Also highway trucks create dust and spillage of oil.

No motor canoes.Number of trade stores: 3 stores which are privately owned.Number of water tanks: 2 small that can hold about 200 liters of water. No water supply etc.

Main food: Sago and Banana. Apart from sago and banana they also plant kaukau, peanut and aibika. Main protein is pig which they eat once in a while, depending on the men who go and hunt them.

Shortage of food is mostly during dry season

Number of Trucks/Vehicles: 4 vehicles-2 PMVs which are privately owned, 2 Hire Cars aslso privately owned by villagers.

Rubber is the main cash crop in order to earn little income .Rate of sale of rubber is 0.45 t per kilo/inch which the buyers from Kiunga come and buy. Apart for that marketing garden food is another means which the women used to go and sell at Kiunga and Tabubil town. In terms of other cash crops, such as vanilla and cocoa the DPI have not introduced any.



Rubber sap in Kiunga

There is no conflict between different churches. The ECPNG and Catholic church work together.

TB was a big/ common sickness in the 1970's but not at present there's none. Malaria is currently the common sickness.

Man 1: The company (OTML) as fooled us and we have split into 3 groups-(the village of Mimingre has been divided into 3 areas). The first one is Mimingre, the second is Sare and the third is Moiang. But before the mine and the CMCA we were one big village of Mimingre.

Woman 2: Before when there were no issues regarding the mine (in terms of benefits) the village Mimingre was under one census. But when the Company began issuing Trust Projects and other benefits, which was not according to what he people want. They were telling lies to us to give us the benefits. This went on until the Court-case took place when Rex Dagi took the company to court for damages done to the River. That time also ENECO was formed. As for Mimingre itself it was under one census at that time. However, during that time some of us who were from the River, wanted to go on their own because they wanted to get compensation benefits for the River that was damaged/ polluted. As for some of us who are here near the Highway we went for CMCA to get benefits in terms of basic services. This caused a division in the village. So those who were near the River went on their own and now have their own census under this LLG. As they are living near the river, they wanted the company to compensate them according to the damages done to the River. The other group of people from Sare they also live by the riverside. The village of Mimingre is now divided into 3 –Sare, Muiang and Mimingre itself.

Malawa: The way your village is divided, is it in clan groups or villages?

Woman 2: We are in villages. Mimingre is one big village and Sare is still under Mimingre in the Government Census. Before the company came we are one big village. Mimingre itself is has 7 clans. Muiang has five (5) clans and Sare has 6 clans. These are the main clans.

Frances: Where you here before the road was built or was it just recently that you moved here because of he road?

Woman 2. The people of Muiang were here with the people of Mimingre before the road was made. This village was here before the road was built. It was the people here, our fathers and grandfathers who built the road with their hands and alter the company came with the machies. The grandfathers they built this road from here all the way to Ningrum and to Kiunga. This was built after the missionaries came and that was during the 1960s’.

Man 1:That water tank there is the Governments waster supply project. They brought the water pump here but it’s not working. The people got angry and they removed it. It was incomplete. They brought the generator to try to pump the water but it did not work. They never tried it. Even though we’ve got good water. If they would have brought a generator it would be much better as compared to the solar pump which they have installed. The tank is still up there but they have not completed their work. It’s just lying idle.The company came and put up two big Southern Cross tanks. That was the first time. When those two tanks were put up, they did not cement the bottom where the water could go and settle. They only put a linen or plastic type at the bottom to hold the water from coming out. So these things were not strong. The weight of the water made it and it broke the plastic and the whole tank is now useless.The other thing is that they should have sponsored some of our students to got to Techniacal schools so that if the things happen like this we could fix it ourselves. But they just came and leave it us and when things are not working we could do nothing and they are left there idle.

Man 2: When the company came in thee was nothing they benefit us with. At the moment we are living just like our tumbunas have lived in the past. Before when this Kiunga to Tabubil Highways was not yet built this was during our tumbunas time they have a lot of protein. There were a lot of wild pigs, birds, cassowary in the forest nearby where now the road has been built.

After the road has been built, all these wild animals have gone. Once in a while we eat pig and cassowary.

Woman 2: When the company first started building the road and started putting stones on the road we were okay at first. But after 6-7 years time we started seeing the dust. So our greens like the cabbage and aibikas which we used to plant near the roadside, we started eating them with the dust but nothing happened. But later on when they put the copper pipeline from Kiunga to Tabubil after five years it started breaking up. As a result the copper pipe broke and copper spilled out into the small creeks and streams nearby. There was this small creek nearby I did not know how many tones spilled over but it covered the creek up totally. All the fish and prawns which once we used to get them are gone. You could see no sign of a living creature in the small creek.

Man 3: The other one is in Kilometer 52. This was a very big Highway truck, it ran out of the road and poured out a very big oil onto the creek and road and nothing has been done about it. We never claimed for the damages done, for the sago and the creeks that were polluted and damaged. It was in our land area (Mimingere). Everything there is also gone. Not a fish or any other thing is there. I never saw any. As for the copper spill when the copper pipe broke, some of us got claims from the damages done for the sago and creeks. This incident did not only happen here but also in other areas as well along the Highway. The amount they gave us is not on what we landowners want but they gave us according to what they want to give. They gave it according to their own judgment and they said that that much values this amount and they gave the money to us. And they said that they paid according to the Government rate. For instance, a sago is valued as this much according to the government rate. But these resources and the environment are ours. Its like when I take my produce to the garden and I mark the price according to what amount I want, and not according to yours. The other thing is that, they used to get stones from the rivers and put them on the road. Sometimes landslide occurs and these piles of stones roll downside covering up the creeks and our sagos on the roadside and also in the long run sediments build up from this stones/ gravels that were put on the road. And also some of the good waters that we used to drink from have now been damaged spoiled. We think that those gravels which they got from the River and put on the road we think that there are chemicals of copper and gold in the gravels. So when it rains it washes these chemicals down into our River the small creeks. These small creeks and Rivers we used to wash sago with drink and son on and all these creeks along the Highway are polluted.

Man 1: The reason we are saying this is because when the OTML' Earth Moving company (Starwest) builds the road it takes sediments from Alice pit and packed it on the road as gravels. These sediments are waste/tailings which they have been treated with chemicals and copper with other chemicals are still in those sediments. That's why all these creeks near the highway have been polluted as the gravels (sediments) contain the chemicals. This is affecting the fish in the creeks and people are scared to use these creeks to wash the sago and its getting worst. When you physically look at it, you will see that the trees are dying out. And also now they are packing the rock acid on the highway which they took from the sediments. This they have to treat it and we do not know if they are treating it or not. And again this is also washed down during the rainy period and this is affecting us the people greatly.

Woman 2: Near that Pump Station at Kilometer 59, the water there is everyday flowing with copper. The people there are drinking, cooking and washing in that River. The Rivers name is Snappy the own that has bridge at Kilometer 30. Everyday the copper is spilling over from that Pump Station.

Frances: How much did you get for the River from the copper spillage?

Man 2: That's K500, 000.00 for the landowners. These K500, 000.00 was shared among the many clans, each getting K10, 000.00 or K5, 000.00 depending on the number of clan members each clan had. And this is not only one village. Its from the head of the River to its mouth, that we (all the villages) have shared this money. The landowners near the Pump station usually get a compensation of K1, 000.00 every year. Those are the ones that live near the pump station. But those that live down the River do not any compensation.

Woman 1: The Rivers that join with the Ok Tedi are often flooded with mud and sediments that goes in about 1-2 kilometers in. And also the waste or tailings they are dumping into the River is with chemicals. And we are now scared that these chemicals have been soaked into the earth and if we plant our garden crops we might still be affected because it will go into the food crops that we plant and will take the food and eat from it. This we suspected it because we have seen it from the banana trees. Even though they grow healthy, still their leaves turn yellow. That's why we think that the chemicals are soaked into the soil.

Man 4: The company (OTML) told us to stop making gardens near the river. But yet their scientist who are working or testing water and the soil say that we could still make gardens near the River. They the level of copper and mercury is still low and it is still okay for people to eat. That's why we are following what they have told us to do. But hey themselves know that its bad. And we know that our bodies are already affected . After a few years time when the mine shuts down we might see the reaction that is after 10 -20 years. The dust from the Highway is also dangerous for use when we breathe.

Woman 2: Regarding transport, there is no transport board that will put a certain rate for PMV fares. Some PMVs charge K15.00 whiles other K20.00. And if I do not sell all my produce I am making less then what I have paid. But in terms of Rubber we do sell for 0.45t /cup. And with regards to our traditional practices initiation is no longer being practiced. But most of our traditional practices the church as come and put a stop to these practices. So in this village we are not practicing initiation.

Views on the CMCA:

Man 1: We've got three villages. One village is under CMCA and the other two are not under CMCA. Muang and Sare are not under CMCA while Mimingre is under CMCA.

Frances: Did they come and explain to you what CMCA was before you sign?

Man 3. No there was no information given about the CMCA. The never explained to us what CMCA was after we have signed. Information is only given on the Office Level, whereas on the village level people do not know what's going on. That time they signed the CMCA I was in the House So that time the Public Relations Officer in Kiunga came to my House and said, "Makim tupela man. Dispela tupela manbai go long Negotiations". So we called all the people together and chose two men not knowing what they were going to do. The office did not explain how we should chose and what s going to happen. He just said that 'chose two people they will come to Kiunga tomorrow for negotiations'. And so we just chose two people not knowing what they will do. After the signing the real landowner as well as those from the other side of the road who did not know what has happened became very angry.As a landowner, I am concern that they should have come and told us what was going to happen so that we can decide for ourselves whether to sign or not. They just forced us to sign those papers. Those tow men who signed on behalf of the whole village were clan leaders of only two clans. The company should compromise with all the

landowners. After they have signed and came back, they told us that the Company said it will provide or give services. For these past years nothing has been given to us in terms of services. They only gave a chicken project-which is not what we want. And so we are not happy with this CMCA agreement because the Company has forced us to sign this agreement. So we thought that it was only negotiations but it went up to the National Government and they made it a law. The should have gotten our views first before the government should pass it as a law. We are not very happy with the CMCA agreement that was signed in 2000. All the landowners hear are not happy because they said their land has been signed away by other people without their consent and also they the rightful landowners said they are the ones that should signed because it's their land. The two men who signed, they signed on behalf of all of us and other landowners. That's how the Company and the Government is tricking us.



Teachers in Sinemarai

The following is a medical report from Runginae Rural Hospital, a Catholic Mission-run hospital between Kiunga and Ningerum, for a young woman who presented with unusual symptoms in 2003, and who subsequently died. The report was offered to the team as an example of illness possibly caused by environmental factors—possibly arsenic or lead toxicity. The doctor believed it to be an infection, but of unknown

Sinemarai, Mianmarai and Openai Villages

These 3 villages met in one group with us.

2.6.05 Senamarai village has been impacted by OTML, the area is totally polluted because of the mine. There were small river streams running through and near the village, and they're polluted now. The fish they used to eat are spoiled now. Even garden food like kaukau, atro, bananas, yams, tapioc, sugar cane and some others. Even sago and cococnut. The animals they used to eat are spoiled—like pig, wallaby, cassowary and some others.

nkno

This company was started by Kennicut in 1972, they were the first company to operate. Some years later OTML came in and signed this agreement. When the company came in, they didn't tell them what would happen with the mine, how the operation would go. Senamrae village people say its very ture that we are all poiled. Big damage on the other side of the Alice River, too. But when it's time for high floods the water goes through their small river system and spoils the environment and gardens.

To sign this agreement, OTML didn't tell them what to do. They came in the village and got those who didn't read or write to sign this without understanding the content. And they didn't

understand the concerns of the village. In 2003 OTML built a double classroom for them, in response to complaints; but they haven't finished completing the lower story of it. The Senamrae village people think the company should develop the road, school, haus sik or health center. The company didn't go in the community and get the people's views. That's what people want to company to do. They said if the mine continues for another 21 years every resource for them will be finished, and the younger generation will never even know these resources.



Sinemarai

Sinemarai Primary school teachers are concerned about the school and the schools in the province. In the WP the education standard, they say, is now very low because of the company and the government, they didn't look forward too much to education. Their concern is that the WP has no big schools like universities or teachers colleges. Law and order is another problem. They talk about the mine closing and how the country will go backwards because only the government and their provinces have benefited from OTML so far. They wish the mine to continue, but they need help and development in their province. The mine is part of the development of the country so it should continue. Leaders in the province are not working well with people in the villages in the past years. At this time now only the Governor is working with the people. Leaders in the community are working with their communities, but the government are not---only the Governor. The Governor has started to look forward in behalf of the people in his province, and recognizing that things are getting worse.

The teachers talk to the company about building teachers houses and new classrooms. But the company just built the double classroom 1st year, and nothing more. Teachers are trying to get in touch with OTML, but the company has not been receptive. The road to the school from the main road in 2003 but there were no more projects.

They shifted villages due to the government, this is their second village. Councillor Maten Kraebi. Total pop 438 Sinemrai, 547 Mianmarai, Openai 200+

Clans and their leaders in Sinemarai:

Maya clan—Rikson Kwe

Dem Clan—Maten Krembi, John Krembi

Hore clan—Gwoiden Hmentori

Miamine clan—Sisa Beng

Mia Rwyang Kye Clan—Ruwa Hmyakhore

Mianmarai ckans and their leaders:

Mia clan—Mr Papare

Amnai Clan—Mr Terin

Hore Clan—Mr Phyaug Grupure

Tkore Clan Mr Aidari Apite

Sore Clan—Mr Uke Yope

Epore Clan—Mr Phillip Beng

Openai Clans and leaders:
Panai Clan—Mr Etru Woknai
Hore Clan—Mr Kisna Kwanai
Mia Clan—Mr Thomas Going

Sinemarai Village: One 2-way radio, six permanent houses, 6 tanks, 2 workers working for wages. ECP is the church, and they support the village with school and sub health center.

The main staple food is sago and banana. They have experienced more than 10 deaths caused by malaria and diarrhea. Our health problems are dirty water and swamps, no proper toilets, new sicknesses unlike anything before, malaria is rising.

In the past they practiced sister exchange but today we choose our own partners. Traditional feasts and ceremonies are fading away because of religion.

Interview with 3 village reps: Mrs. Elcy, Gren Somoi, Tetenai Morin

The village did sign the CMCA without knowing the good and bad of signing; the councilor and others went to sign it in behalf of the village. The OTML officers told them that if they sign they will all get permanent houses and funding for our projects, water tanks and compensation.

The good road was built in the village but this was in OTML's interest because of the dredge at Bige. We are not really benefiting from this road because we don't have cash crops for selling, we don't have our own truck either. We use the road for going to and from Kiunga, but it doesn't profit us.

Mrs. Elcy tells us the school fees are high for them. She has children in community and elementary school and she finds it hard to pay because the costs are: grade 6-8: K250; grade 3-5: K150; and elementary K100.

She says: When I sell a bag of sago I get K30. I then pay K20 for my fee back and forth and K2 per bag of sago to transport. What profit—K8? I think we here in Western Province have lots of problems to be addressed. We are experiencing our youths drinking home made beer, smoking drugs (marijuana), domestic abuse and many more, we believe these things are introduced and influenced by dredge workers and outsiders.

We have on and off trade stores, a rubber tree plantation, sago, and garden foods for selling. But our problem is that trade goods prices are very high for us and the rubber price is not good (48t per kg), and transport fares to and from market are high.

We three villages are experiencing some sicknesses never seen before—like polio, kidney problems, urine problems, hernias, itchy skin, Aids and HIV...and our main sicknesses are malaria, coughs, diarrhea and asthma. We are lucky because we have the Sinemarai health Centre funded by the European Union and AusAid. According to our Health Centre reports, we have many deaths caused by these sicknesses and seven HIV victims, five that came from donated blood and two are [sick from?] patients in the ward. Water is also not safe for washing and drinking.

We are not happy with the company and the government because they are treating us like animals, we are not benefiting. Ok Tedi should do something good for our old people and for all of us, if not the company is very stupid. We don't want the mining to continue, they must stop

and clean up our river system. The CMCA is a very bad agreement that must be reviewed or destroyed.

Our main concerns are:

1. Our environment is being destroyed by the mine
2. Review CMCA in terms of destroying it
3. Increase compensation packages
4. Development must take place

Overview (from Kirsch 1993:?)

In Zone 4 [South Ok Tedi census Division, Komokpin to Atkamba, including West Awin Census Division Bige], the Ok Tedi undergoes a transition from a fast-flowing, sloping river that transports its load of suspended sediment downstream to a sluggish, meandering river that begins to release the finer sediment that it carries. While the volume of deposited mine waste is greatest above Ningerum, Zone 4 is particularly vulnerable to overbank flooding and has sustained a high level of damage from material deposited outside the river channel. As a consequence, the area has been heavily affected by the mine waste, which has been deposited onto forest and garden land, into adjacent wetland areas and upstream into the numerous creeks and streams that flow into the Ok Tedi. This is in stark contrast to the alluvium that once fertilized the river's flood plains, turning them into ideal garden land. The mine wastes have had adverse impact wherever they have been deposited, killing plants and trees, and disrupting local ecosystems. The damage extends for approximately forty kilometres along the river, with areas of dead trees on both sides of creeks at distances of three kilometres from the main channel. There has been little regrowth to date, and large areas are virtually devoid of life.

Bige Village

04.05 From Techa's notes:

This is the dredge community, and they say the leaders are meant to represent us but they have their own agendas. They don't trust leaders, --leaders are irresponsible and did not represent the people's views, they say. The community is divided, some signed the CMCA and others were with the court case, ENECO. 'It has spilt us into two groups and we are not happy with this.' They have no knowledge of mine continuation and no information on environmental impacts -they were expecting the colour of the water to go back to normal but it has not happened yet. Since the mining started they haven't been informed about anything, they notice a change, the water changed and then it didn't go back. The environment has been badly affected, all foods from garden to seafood dying out.

They are not happy with the CMCA and want the mine to stop; they are not getting benefits. 'There is no use for the mine to operate' They don't trust the middle men, CMCA officers and company people, who do not think about the people's interests. 'We don't want to sign the CMCA-we have never seen environmental reports from the mining company and the government; we do not know how badly our environment is affected,' says one maus meri. 'Ok Tedi has done nothing good for us; they must go and clean up before they go.' Isaac's wife says: 'Ok Tedi has tied us and thrown our rights away and now we are crying for help to set us free.' They have heard that now someone signs the CMCA they cannot complain, that all the people cannot complain anymore.



Bige sulphur stream

6.05:

They have four major clans.

1. Bige clan
2. Amroe clan
3. Xmay clan
4. Hore clan

Village Councillor: Martin Krembi, Ward 24 . He looks after four villages

Approximate Population: 104

Number of trucks: Nil

Number of grade 10 school leavers: 5

Number of people working with OTML: Nil

Main Church: ECPNG, which provides basic services such as health and education (elementary school)

These are Awin speakers [language], Aquim [Aikom] dialect. Mr. Maten is their village councillor. The nearest town is Kiunga the method of transportation used is car. Their village was founded long ago and they have not shifted from one place to another. Their village has been subject to flooding but they do not have plans to relocate on to higher ground. Their approximate population is one hundred and four [104].

There is one out board motor owned by an individual in the village; two operational trade stores; and ten houses with iron roofs.

There is one community tank donated by Ok Tedi mining and five privately owned tanks. There are no radios to radio to town in case of emergencies. Only five people in the village graduated from grade 10.

Observations by the team: Some permanent houses built by Ok Tedi mining were incomplete: no water connected for shower and toilet ; houses were made from soft and untreated wood; some parts of the house rotten away.

The villagers heavily rely on the company for support.

The main food is sago and bananas; other root crops are also eaten, like cassava ,taro, kaukau and yams . There is always a shortage of food to eat, as there seasonal problems with food availability.

Mine-related impacts on food production and diets are:

- floods destroyed food gardens

- floods destroyed sago palms
- fishery resources destroyed

No one in the village works for wages.

The people in the village sell garden food in the market to earn money. They do have rubber trees and do tap them on regular basis however as the price dropped to 65 toea per cup lump the farmers gave up and also there's no assistance from the department of agriculture and live stocks [DPI].

Malaria (with an increase in mosquitoes) and shortage of food causing malnutrition are their main sicknesses.



Bige dredger guards

Women's Views:

The Company has given them some projects through the CMCA Project. They gave the mothers cabbage, cucumber and bean seedlings with trays, and buckets which they gave to each member of the Mama Group. The Mama Group at Bige started in 1999 and broke up in 2000. There was no good training for mothers especially on how to run this project in terms of management, which is the most important aspect. The Officers of the Company just came and gave them those things and left.

Sicknesses- The most common sicknesses the women at Bige have observed include malaria, grille, diarrhea and body itch. This is due to the River over flooding frequently overflowing the good drinking water and creating swamps.

Social problems include alcohol and marijuana, which are major social problems among youths and men.

Minimum earnings from women's sales of market goods are between K10.00-K30.00 daily.

As for the women, they stated that mine can continue but it should still pay its compensation. They feel that the money they are currently getting is not enough and the company should pay them monthly or quarterly. The amount they are currently getting ranges from K140.00 to K70.00.

The women said that all their food does not have taste anymore. For instance, sugar cane and bananas are tasteless. At the moment the women are making gardens near their houses. Sago taste differently. It grows very big but does not have enough food/juice.



Crocodiles at Kavianaga and Bige

Yeran [Ieran] Village

4.05 Interview with Martin (from Techa's notes):

Originally we were all one but then we divided into 2 parties- CMCA followers and lawsuit followers. After this we were lost in the jungle, in the bush, so now when you people come so first of all we have to be notified before any groups enter our village, we have two leaders leading us, CMCA and lawsuit. Two chiefs broke away dividing people into two groups. In 1984 they started experiencing problems in the river system, flooded the river, -there hasn't been proper awareness carried out since the mine started to operate-as years passed trees and vegetation die-layers of mud on the river banks, lots of mud- good crops destroyed, fish and crabs, seafood bugged up, before we used to dive for fish but now we are not-we have talked and talked but nothing has happened, we never succeed-we talk to our leaders but we don't know if they fight for us or not-1996 lawsuit and distribution of compo-Natural creeks water level rise makes it difficult to fish and travel-sago is not good as before and hard to find, sago trees died and environment all got worse along the river, dieback-experiencing bladder problems, painful urine, dizziness- washing full time in the ok tedi river then their body becomes weak, skin sores, we feel tired and like sleeping-experiencing throid problems, typhoid people dying-mothers experiencing birth complications, -health workers telling us the water has been poisoned, -ok tedi never informed us of the mine continuation and what further impacts it will have- moved inland on higher grounds, lower land for gardens along the river are impacted, affected by dieback. -sizes of fish are changing, fish with no blood, hookworms found inside fish,-Feeling no hope, we cannot decide for the mine to continue because the mine has not compensated us for the damage it has done -CMCA was introduced after the lawsuit mainly to break up and split the communities-compensation in general package to communities-our middle men should come down here and tell us the truth and not cheat us- ok tedi officers never come and do awareness concerning the environment- those who sign things are not going well, who are in the CMCA's still want to be part of it until the review, we haven't been informed for the extending of the mine-budget for CMCA has been done but implementation of projects has not been done-if the mine stops who will maintain our resources- our main issues are in priority development, CMCA, the environment and compensation They are very confused, though they talk they are very confused, though they don't agree with the CMCA they don't know if they should be part of it or not-Majority of the community members were in the CMCA's, Alex Maun is from Yeran, majority of the community members are from here but now he has left they are confused, he left the village because he knows the CMCA's are not working, he has gone to live in Kiunga now, the only flashy house in the village was Alex's house., they don't trust Alex anymore. -women expressed they were angry at him, they were very clear about how they feel about the environment and the situation. They cry and talk from their hearts, their environment is destroyed

and the company must do something that is sustainable and benefit people who live and the future generations that will come-next trip when you come, make sure the chief and their two groups are here when you come, they should be in the village-the company can pack up and go but they must clean up their mess before they go.



Kiunga

Kawok Village

From Kirsch (1993:9-10):

Kawok village used to be located further east along the Fly River, much closer to Kiunga. The villagers moved in 1961 because 'too many people were dying'. ..The land on which the village is built is owned by members of two lineages. The other villagers are members of eleven different lineages, with land rights elsewhere. ...Land ownership and village residence do not necessarily correspond. ...The villagers report that there is plenty of game in the forest and swamps surrounding the village... Although regular transport to Kiunga is available, the people from Kawok do not tap their rubber trees. They explain this in terms of the low price and their distrust of the businessman who controls the provincial rubber trade. They do actively market their produce in Kiunga.

There is no medical aid post in the village; children go to school in Kiunga as well. There are six canoes with outboard motors based at Kawok. There is one operating tradestore, three houses have iron roofs, and there are two water tanks in the village. There have been six graduates of tenth grade... The villagers are members of the Catholic Church and are still very active in traditional religious and ceremonial activities....They still make use of divination and curing practices and actively initiate their young men into the male cult.

04.05 from Techa's notes:

The community didn't sign the CMCA's but were for the lawsuit. But out of the CMCA's no proper benefits, losing land rights, CMCA was not in their favour, because the law suit the company came up with the CMCA to split people up.- sharing attitude was almost gone before we share food, sago, fish, and other things, with our neighbours, but now our food gardens are damaged, our sago is damaged, making it difficult to find food, so they can't share anymore, they don't have any extra food, - all the impacts you have heard from other villages, one kind tasol, it is the same here. -fish caught after an hour or so the fish body gets rotten and falls off, only the head remains- they have been divided but now we have to find a way to co-operate with people who have signed the CMCA's to work together and fight together as one- your work here is helpful to us and you have strengthened us. - we still stay firm and we will not sign the CMCA's and we will not change-we want the mine to stop but

before it does this, they must come and clean this river system, they must clean up the mess done to our environment, our water must be clean again.

29.5.05 There are 12 clans:

Imiran (asples lain the Awin and Yonggum gave ground to Abai Miripki (?))

Abai (sc of Miripki)

Miripki

Kawok (subclan of Miripki)

Komobiran

Ya'at (sc of Kawok, originally from border)

Ninibiran (sc of Miripki)

Anombiran (sc of Kawok)

Wambiran

Miripki Kutjuran (subclan of Kawok)

Wimko (sc of Imiran)

Girewa (sc of Anombiran)

They have an elementary school (this is new since 93). K50 fee for community school and K1200 with board. K200 for top-up

In 1987 The Provincial govt gave them a tin tank, and they now have 4 OTML Trust tanks and a haus win from the trust too. Also they have 1 house from out of court settlement.

1 Kawok man works for OTML, but there is no APO.

In 84-86 they saw first effects of the spill, when the water color changed. It was worse on Ok Tedi, where the color went black. Here they saw plants and trees dying. They had clean water still but they could see the effects of Ok Tedi would come to the Fly too. The Fly dry time can bring low and still water and you can see the algae and discoloration and it made your legs itch.

Imiran clan leader is Petrus Dangan. They walk one day to Kiunga one day

There are 20 families—the die-back census was made last year.

8 motors for boat—2 dinghies, 6 canoes

1 canteen, 4 radios in village

1 undergraduate degree (Miriam, who works at No 1 Finance in POM)

3 grade 12 graduates, 9 grade 10's, some grade 8 and 9, mostly grade 6 leavers.



Sago and fish, tapioca, cassava, bananas, cabbage, aibika, ferns that grow by the river, sago, abus (fish), bananas. If you hunt you can get a bandicoot and a kapul. Wild pigs eat their kaukau and yam and tapioca, lots of wild pigs here. Kindam at dry water, when the wild fowl lays its eggs. Calendar is mucked up now though—when the turtle lays eggs—it can flood anytie now. May-July is traditional rainy time, Septstarts the turtle egg laying and the dry.Peanus, aibika, pumpkin, cucumber, sugarcane, pineapple, beans, taro, watermelon, in their gardens.²⁷ Now sago sometimes has no starch and the leaves are dyiong—we lose supply the thatch pangal and its less and not usable. Some things die in the ground, some don't grow well, only the strong plants grow.

2nd and 3rd sucker of bananas are not good bananas. Most gardens are by the water But the food doesn't fill you up, its tasteless and makes you hungry Fish has sores and is rotten, red worms in the mudfish, catfish have rotten or immovable bodies. They buy sago from the highway markets head of Fly River, for fish. Half as much sago these days, and no susu in it. Some chickens are bloodless (eaten only for parties), and the pigs have sores and are skinny. The church is catholic but EBC sometimes comes, some are SDA too. K400/tonne or 45t/cup for rubber, no road to sell it anyway, if there were a road it would be okay, but theyd need feul. K180 for 50 litres hire on 55 hp motor, but for 15 hp its only 15 litres to go/come from Kiunga. Ok tedi sent boat around to buy rubber but it's the same price for the past 20 years. No well baby program, but govt sends nurses every 12 months.

Sanguma in land disputes in 90's, but finished now. Now they believe sickness not sorcery kills, for the most part. Malaria, TB, premature babies Exogamous clans, no sister exchange, brideprice K4000-5000, on Alice river its up to 20,000. Initiation important, only initiates can rule, youre a woman if you're not initiated. Not clan specific. In men's house its 6-7 months or at the very least 1 week. No water for them. Women and men separate, or men get elephantiasis from women. Women also have taboos, not too many. Consensus on mine closure, and nothing from CMCAs. They need conditions to any development, that OTML listens to them, knows what theyre thinking. Discouraged by government patrols and broken promises. Throw away the 9th agreement. Slime in mud at the low water time. Catfish, greasy fish, barramundi, turtle, prawns and nailfish all down in numbers. Before, it was easy to get food, now not at all. Hard to feed anyone. Tank water, but rain also brings copper dust. Dry season they find well water inland. Before the mine they used the river water to drink and cook. Washing in it now makes them itchy with sores. They wouldn't want mine even if they cleaned the river and gave benefits. Not told of the CMCAs. At the fish market they sell big fish for K10-15-20 once/week they make K20-30-to even 100. Sell betelnut seasonally in wet season, K150 for 2 bundles, at Kiunga markets. But it costs K70-100 for a round trip to Kiunga, or K20 on a passenger boat roundtrip. Copper dust, joint pains, swollen glands.

OTML bin statim wok long 1984 ikam inap long nau olgeta environment bilong mipela ibagarap olgeta. Olsem na mipela expectim OTML na government long fundim o soporim mipela wantaim gutpela fida roads, helt services, skuls, permanent houses, water transport, etc. OTML na government ino bibn wokim wanpela samting yet long stretim dispela ol hevi bilong mipela yet.

Olgeta environment na risoses bilong mipela ibagarap olgeta. Natural color bilong wara insenis olgeta. Fish idai nating nating, species bilong kainkain fish declne, sediments forming, ol diwai dai nabaut (dieback), water spill all overt the places,

Helt sait bilong mipela ino gutpela bikos nogat hausik klostu na tu nogat marasin na wokman meri long helpim. Bipo mipela ina save experiencim kainkain ol sik na sua wea nau mipela wok long experiencim em: yaws, sua, skin skirap, joint pen, eye problem, premature and abnormal birth, etc.

Dispela social problems em ino hevi long mipela bikos ol lidas, village elders na ol bikman isave wok bung wantaim long kontrolim ol yangpela. Trup;sem sampela yangpela save smokim marawana haithait tasol ol lida save mekim save long ol yangpela long stopim.

Mipela igat bikpela hevi long education bikos mipela nogat gutpela education system, skul fi antap tumas, OTML na governman ino save sponsorim ol pikinini bilong mipela ananit long scholarship bikos olgeta environment na risoses bilong mipela ibaragarap olgeta.

Mipela ino develop economically tasol instead mipela bungì, ol bikpela hevi olsem; fish maket ipinis, nogat transport long transpotim rubber na rubber prais ino gutpela (50t per kg) olsem na life na sindaun bilong mipela igo hat olgeta.

Mipela olgeta manmery long plenty ples ino hamamas olsem na mipela ino laik long wokbung wantaim OTML.

Nogat problem namel ol yut na elders bikos mipela ples stap wantaim long law suit olsem mipela olgeta wokbung wantaim.

Mipela igat bikpela concern long polluted water, eating fish, na sago bikos sago na fish em main staple kaikai bilong mipela. Life bilong mipela mainly depend long Fly River bikos mipela dring na waswas long Fly, catch fish (our main protein), wasim saksak, bilong kaikai na tu bilong salim long maket long kisim moni long inapim ol needs bilong mipela.

Mipela laikim bai OTML mas istap wok blong mining bilong olgeta environment na risoses bilong ibagarap olgeta. Mipela ibagarap olgeta olsem (10) tenpela yia igo pinis, mipela ino senis economically. Mipela ples ino bin signim CMCA bikos mipela save dispela agrimin gutpela long sait bilong OTML na govamen na ino blong mipela manmeri blong ples. Olsem mipela ino inap tru senisem tingting na signim CMCA, mipela Kawok ples bai stil putim time gen long 3rd case mas on gen inap mipela winim.

Mipela laikim summit mas kamap na ol imas toktok long stopim mine, nama 2 samting—klinim environment, 3 em compensation, na last tru na bikpela em plenim na redi long movim 3rd case long proceed gen.

The view of Casper the driver is that there have been very rapid sociological and custom changes here. The copper drier is located in the public place and polluting the air.

We always smell the strong chemical pollution, villagers say.

The rubber factory is located right in the center of town which pollutes the whole town.

Pond drainage used for chemical waste, when OTML at high tide drains out the waste.

Kirsch (1993:11) reminds us:

The greatest problem facing the people of Kawok is their fear that OTML operations at the Kiunga wharf are polluting the Fly River. Even though the village is built on the banks of the Fly, the people living at Kawok no longer make use of the river. They do not drink from the river or swim in its waters. They no longer eat fish from the Fly because the fish are said to 'taste bad' and have 'no fat'. Whereas they used to catch turtles with fishing lines and dig up turtle eggs, they report that today few turtles come up the Fly to lay their eggs. They report that someone from the 'company' told them not to make sago on the Fly River. Since sago production requires a supply of fresh water, which may be difficult to obtain in sufficient quantities in the swamps, riverine sago palms are a significant resource. Only a few people make gardens along the Fly River because most people fear the pollution from OTML operations in Kiunga. The village has turned its back on the river that once was its *raison d'être*.

Moian Village

Moian is not a CMCA signatory and a lawsuit village.



Moian women

Kirsch (1993:11):

The residents of Moian have rubber trees, but do not wish to tap the rubber until the price increases from the current level of 18 toea/kilo to at least 35 toea/kilo. They sell garden and forest produce at the market in Kiunga, but no longer sell riverine produce out of concern that it will cause illnesses for which they will be held responsible. There is both an aid post and a school in the village, eight or nine canoes with outboard motors, five tradestores open for business, seven houses with iron roofing and four water tanks.

[In the following tape transcription, Simon Warr has apparently introduced the idea to villagers that the mine 'may' –is rumoured to—continue for another 21 years –which was not suggested by anyone else in the team, but may have been a story Simon himself heard].

Before the mine started everything in Moian village was all right, like the garden food, banana, taro, kaukau, yams, tapiok and sugarcane, also sago palm—and all the fish in the Fly River. The river is completely polluted [now]. Nowadays in Moian village they are finding it very hard to find money in their life because othis mine pollution and now they're finding it very hard. The get money from the market by sago, fish and garden food. Before they made sago along the Fly River but now at this time it is very hard, now they go very far in the bush and make camps in the bush and stay there for two weeks and make sago and bring it back home. That's the only place they will find good sago. Same thing to fish: before its easy for them to find fish in the river because of fprest or bush along the side of the river; they used to find fish because fish used to go inside the cold and shady places. So village people went to the river and put their fishing nets and lines and would catch fish, but now it's very hard for them to catch because the bush or forest along the river is gone.

The environment along the Fly River is polluted and everything there is to eat or to use or you see there is all gone away. Animals—frog, cassowary, cuscus, crocodile, catfish, eel. That's some of the tings that they would sell at market to make school fees, and now it's hard to raise school fees. Elementary school is K60; Primary school K80; Grade 6-8 K200; Grade 7 K100; High School is Grade 9 K1000, and Grade 10 1500. Before they could make school fees at market in 2-3 months, but not now.



Moian

After WWII two men from Moian went on patrol with other Fly River villagers and some white men up to Tabubil. They went in the bush for a day's walk and they saw this thing and put some mark like metal or iron in the ground and tell them that you will see some good thing will happen later and you live on, all this the white men patrol officers told them, and then left and went back to Australia. When they came back to start the mine in 1982 to 1988 there was an MP from the mouth of the Fly River who signed the agreement, Sir Evia Olawale. Julius Chan was PM and the PPP was leading the country. That agreement was signed at the time because Sir Evia was in the PPP party.

At this time the concern is that they want the mine to see them and give them something to help themselves. Nowadays they are very poor for everything, like school fees. That's why they are concerns about Ok Tedi mine helping them because they want to do something or talk to the mine. [Or] the government should bring in the police to stop the mine.

The company does nothing in the community. They gave only two water tanks and one community hall, but these things didn't benefit the community of Moian. Now the concern is if the mine wants to continue for another 21 years all right, but the mine must do some good things for them so they will benefit from it. If not, close the mine. But before the mine closes, they must clean up the river system. Then they can go.

Moian village has two groups of people, one is for CMCA and one is for ENECO, and this is a dispute in the community. The CMCA they signed without the consent of the village people.

BHP has been to court, so that's why they don't want to go back with OTML and be a partnership with OTML. Because their name is spoiled all right, so more better to move out from them and leave the helpers. But the content inside this, the people don't know what BHP was thinking and doing before they just moved out. BHP got 12 men from the group and got the paper with all the English terms that people don't understand and they signed it without the consent of the people.

Opt in, Opt out: this means those who want to go to court will sign to opt out, and who doesn't want to [go to court] will sign to opt in. Moian villagers say they have spoiled and polluted the village—their fathers did this; but now the young one say it's time for them to stand up and stand up for the next generation coming up. Now we have to go and talk to the company and to the government and talk to them about their leaving now, and cleaning this up, so the next generation can come back and get back to normal.



Dieback near Moian

The environmental scientist for OTML is Yaruk and he's from Manus Island. He is the first man to go around the villages on the Fly River. That time when OTML started to form the CMCA and he started to make awareness talks around the Fly River and Western Province.

In the first case of Rex Daudi, the information OTML gave everyone on the river was that they were courting Rex Daudi only, not everyone, even though they were all supporters of Rex too.

Regarding the CMCA in Moian village, they don't know what they are doing now or where they are standing now, only the leaders know what to do. When the time came for a CMCA meeting they went up to Kiunga to meetings and came home and talked to the village about projects, but still some things haven't come. When the CMCA group came back to the communities they told them another story maybe [he meant the leaders may have lied to the people]. The promises are not working for many years now. The real story, the company tells them, they came and told the village people, a defense story. The village people think that this CMCA always tells lies all the time after their meetings.

The Concorde-Pacific mining camp road was built from Kiunga to Manda. Bonny Kutuwak, councillor. Kevin Komoiya, is the LLG Councillor, but there are no wards yet. 7 main clans, and they all came from West Papua in sections, perhaps 7-8 generations ago. Now they have a population of roughly 700+ .

There are 12-13 outboard motors, 4 trade stores, several grade 10 and 6 leavers, and one grade 12 grad. There are 10 house copper, 4 water tanks –from the OTML trust—CMCA, one two-way radio at the aid post (although the aid post is small, no APO, but a govt worker comes whenever he likes to come), an elementary and community school—both Catholic, a community kibung haus and a Catholic lotu.²

They have sago, fish, and not much garden food. They eat sago everyday, 3 time/day at best, or 2 times a day when hungry. Their protein is fish, muruk and others—kapul, pig, pisin, kindam. Floods will kill the sago near the river, but on higher ground its okay. There are hookworms in the mudfish, and they also have catfish, nailfish, tilapia, but almost no more kindam or tortoise. They eat crocodiles and sell the skins. Their fish are sick, but not the animals in the bush.

² Compare Kirach (1993:11) where he noted the residents of Moian had rubber trees, but were not tapping them because the price per kilo was too low. They sold garden and forest produce at the market in Kiunga, but no longer sold riverine produce out of concern that it would cause illnesses for which they will be held responsible. There was both an aid post and a school in the village, eight or nine canoes with outboard motors, five tradestores open for business, seven houses with iron roofing and four water tanks. There are no refugee populations nearby...Villagers were members of the Catholic Church.

The food is tasteless, not filling. The gardens are flooded and they get bugs now--caterpillars, more everywhere, are destroying crops. In the dry season they are short of food and water, and buy sago from Kiunga market. They buy from highway people nearly every day at K2-3/day in the dry season. They sell fish to buy the sago. But it's also hard to stop eating their own fish, they say. (Note Kirsch [1993:]“They are reluctant to sell fish in urban markets because the buyer might become sick and blame them for the illness.”)



Fishing for kindam

They still have some kindam, at low tide, after rainy season, and it is the normal color to them still. Only the fresh water stream kindams have gone black. Never has anyone ever told them the fish is poisoned. Some of the catfish are very thin, and their heads are wrinkled. Swamp based fish have now moved out with the water snakes—they've gone. New fish have moved inside now. Poison nail fish is one of them, it's like a greasy fish.³

The pigs and dogs are skinnier now, and dying. Before we waited 3 days to bury our bodies and now they rot in one day. There are also more mosquitoes now, much more—now we use mosquito nets, they say, and never did before. There's lots of malaria—skin rashes, and sores from the river. Well water for drinking in the dry season, and 2 creeks nearby in bush. Sanguma, malaria, TB are all common. There are still taboos for periods and pregnancy, and they use custom healing or the hospital both. They still have initiation. Women are capable of ceasing to menstruate by custom methods.

Brideprice is k4000-k10000 max.

There are 18-20 villagers working in town are about 18-25 villagers, and 8 work for omtl.

They have 3 issues—the CMCA's, logging, and the ENECO court case. The loggers have not come in yet, the landowners stopped them. They just made a road and never informed the

³ Again, cf. Kirsch(1993:12):

They still made use of traditional divination and healing techniques, attended pig feasts sponsored by neighboring villages, and participate in male cult ceremonies. The villagers were quite concerned about the 'copper pollution' entering the Fly River at the wharf in Kiunga... While the village stands on land at some distance from the Fly River, the people were "very concerned that the 'copper pollution' will enter their local waterways and wetlands when the water level of the Fly is high enough to back up into its tributaries. The people from Moian no longer make use of the resources of the Fly River or the adjacent river banks. They told me that a 'scientist' visited the village and told them not to make gardens along the river. Some people make their gardens along the tributaries of the Fly, but most have moved their gardens inland. As a result, their gardens are no longer as productive, because land away from the river only yields one or two crops, whereas land along the more fertile river bank continues to bear fruit. They no longer catch fish or other aquatic life from the Fly. In the meantime, there are plenty of fish, turtles and crocodiles in the feeder streams and swamps, but the people of Moian wonder whether these, too, will soon be affected. They do not harvest sago palms that grow along the Fly River although elsewhere sago is plentiful. There is enough game at present, but they no longer hunt near the Fly.

villagers—it was illegal—and Greenpeace courted Concorde Pacific (which is RH), and they negotiated with the PTA and PTB landowners on their terms and conditions, the villagers say. Or they've threatened to block the road. One kid from here worked for them but they didn't recruit from us, we're told. The CMCA project is like the lawsuit. Some signed the CMCA, but there was no consultation. It's divide and conquer. "These NGOs and the company are all breaking us apart."

Their food is all ruined. Sago not made here, expensive. Hard to make money. Kiunga. Not many fish caught. Ell 6-10 fish per week, 50t to K3, not big ones. Sell fish every day to buy sago for that day. Every morning take nets up and sell fish for sago. Make less than K3 each day at market. 5 gallons boat petrol to kiunga; k20 round trip fare. So you give your fish to a friend to sell if you haven't got the fare. Not each person each day goes to market, but every day someone goes. Not fair—everyone's working and there's no food for their efforts.

Everyone has nets and they drop them in the afternoon, you check you net, take 10 fish, then they stay alive until you have 30 or so, then you sell them at market. Buai and daka, and some old people make kambang from shells too.

Jan-Feb-March-April they have fruit every 4 months seasonally. The fish also have no seasons now, whereas they did before. Abus from your bush spoiled by die-back and CP. Before they dove in creeks, and now you can't dive. But the fauna is beginning to come back from the road area (after 2 years: construction was in 2003).

Some drinking and break-and-enters. Still there is respect for elders. First we crossed the CMCA people for signing, Now not so much arguing about it, they try to work together with the money they've been paid.

CMCA money is:

K500 first payment from fetus to lapun.

K300 second payment

K100 final payment

To make K900 total—they get housing materials, some posts and cement and copper. They're still sharing across families and groups anyway. Signers got K30-60,000, and supporters got K900.

The CMCA's are all about getting a little money. 5 clans under ENECO. Court case includes subclans from every clan. So they're all bound by the CMCA's—Kawok, Yogi, Komopim—they always chased OTML away, and none have signed. So they're the strong ENECO line, and those here at Moain are under them. Even for lots of money. There are committees for each side. Rex Daugi hasn't given us money (the CMCA line complains).

In Moain: Steven Wembot signed, and Conrad Bob of Opiro clan also signed.

We spoke to these women:

Rebecca Konduk Kamben, Frida Nengaro, and Enrika Nunuk, and the man Bosco Awok.

Mipela hia long Moain I signim CMCA pepa tasol ino dispela CMCA, mipela signim CONCERN FORM [CONSENT FORM?]. OTML officers ikam na tokim mipela olsem, sapos tupela signim CMCA pepa bai yupela kisim benefit olsem: gutpela haus, gutpela skul, bai yupela kisim tu kainkain project sapos yupela askim bihain. Ol manmeri yet makim mipela long signim CMCA or CONCERN pepa. Mipela ino bin readim na klia gut long dispela CMCA pepa bikos ol OTML Opisa igivim mipela sotpela taim tru.

Mipela ino kisim wanpela benefit bihain long signim CMCA. Bvenefit mipela ksisim em haus win na em tasol.

Bipo long Mine istat em olgeta samting orait tasol bihain tasol kam inap nau em mipela igat bikpela hevi blong kainkain sik na sua olsem yaws sua, leora, join pen, premature birth, absnormal birth. Mipela nogat helt workers na saplais.

Mipela orait, social problems ino bikpela hevi long mipela, igat sampela yangpela bois tasol dave hait na smokim mariwana tasol ol lidas save wok strong long kontrolim.

Mipela igat plenty pikinini long continue long skul tasol bikos long skul fis antap tru olsem na olgeta nau stap long ples.

OTML na government ino save sponsor wantaim ol scholarship wea bai ikem helpim mipela.

Mipela igat ol on and off trade storestasol prais bilong ol samting I antap tru. Mipela igat rubber bilong salim na kisin moni tasol market prais bilong rubber factory ino gutpela (50t per kg). Bikpela hevi tru em long Fly River long wara I kala senis igo braun or dirty olgeta, fish ideai, sago dai, tree dying (daibek), soil erosion, sand banks forming, garden grounds polluted, etc.

Mipela in hamamas nau long wok bung wantaim OTML bikos mipela ino kisim wanpela benefit bihain tasol long signing blong CMCA ikam inap long nau. Ol OTML offisas noken kam raun long ples bilong mipela bikos mipela ino laik long lukim ol or gavman offisas.

Bikpela concern bilong mipela em wara bagarap, abus, fish finis, na sago bilong mipela idrai etc. Sap[os mine bau continue gen oriat OTML mas helpim comsensation moni, update gen long population namba. Na sapos dispela olgeta nogat orait mining mas stap wok. Economically mipela ibagarao olgeta more long bipa bikos ol gaden kaikai, kumul, fish, sago bilong mipela yet kaikai na salim tu long kisim moni ibagarap olgeta.

Pastaim tru mipela ting CMCA igutpela tain mipela harim tasol gutpela sait na nau mipela yet lukim na nogut sait bilong CMCA olsem na mipela ino hamamas bikos CMCA ino helpim mipe;a agrimen kalabusim raits bilong mipela long complainim ol hevi o bagarap blong mipela we mipela save facim.

Mipela laik Kiunga Summit mas discuss olsem:

4. *ok Tedi mining mas stap*
5. *stretim environment bilong mipela*
6. *compensate ol bagarap we mine kamapim*

LLG member Bonnie Kutuwak

Ol lain signim CMCA em: Kawangem Okimbain Klen Lida Paul Kaiyom, na Komiti—Kevin Komoiap.

(1993:13) Kirsch noted:

The people of Moian want OTML or the government to compensate them for their loss of access to resources associated with the Fly River. ...Villagers also want to increase their share of the Village Development Fund monies, which they say amounted to only K32 per person in 1992 (K10,000 divided by 310 people – adults and children). ...They say that they 'suffer' as much as the people who live along the Ok Tedi and therefore should receive commensurate VDF payments.

March 25, 2004, Steven Wembot sent the following letter to the Manager of the Ok Tedi Development Foundation:

Subject: Appointment of Trustees

Dear Sir,

With regard to the appointment of the Middle Fly Development Foundation Local Trustees, the following shall be considered.

1. The current BOT has not fulfilled the Middle Fly Development Plans.
2. Politics of Melbourne court and CMCA has not been resolved in the region.
3. New members could drive away the purpose of the CMCA.
4. The current BOT has yet to see major projects off the ground satisfactorily.
5. New members will change the goal post of making decisions as this could delay the progress project implementation.
6. As we are running out of time we want to maintain the current board in making stable development decisions for the region.
7. The current BOT has a duty to ensure that the CMCA beneficiaries' aspirations initiated during the negotiation stages are achieved,

I strongly recommend that the current local trustees be re-appointed for the next 3 terms as I have a trust in working together as a team to develop our region.

Other concern is to consider appointment of External Trustees locally as this has previously caused delays in schedule meetings having an impact on decision making.

For your perusal and information.

Yours Sincerely,

(signed)

Steven Wembot

Middle Fly Development Foundation

BOT-Chairman

Atkamba Village

From Kirsch (1993:10-11):

Atkamba is composed of three units, sometimes referred to as the Mission Station, Aran #1 and Aran #2. The village was founded shortly after 1951 by a missionary affiliated with the APCM. Previously, the people lived in independent hamlets along the river and between the Ok Tedi and the border. People currently living in the village own land over a wide area, including the land immediately surrounding the village, along the Ok Tedi both north and south of the village, west of the village as far as the border, west of Komokpin village across the border in Irian Jaya, and along the Muyu River in Irian Jaya. Also, some current residents of Yogi village formerly lived here. Atkamba is a mission station in decline...There is a school at Atkamba. The airstrip is still maintained, but its use has largely been relegated to emergency medical transport. Even then, given the limited availability of MAF aircraft, it is often faster to send patients by outboard canoe to the hospital at Rumginae... The Trust has built a steel bridge over At Creek, which divides the Mission Station from Aran #1 and #2. The creek used to be green and full of fish and prawns; it now runs murky brown from the backflow of the Ok Tedi. When the river is in flood, the new bridge is submerged and unusable, forcing villagers to paddle their canoes between the two parts of the village, a problem they share with villagers at Yeran.

While the people at Atkamba have rubber trees, they are not tapping them because of the low return and the expense of transporting bulky rubber bags to Kiunga.

As elsewhere in the District its Health Sub-Centre is not up to staff strength and is functionally little above an ordinary village aid post. It is one of the Sub-Centres that King reveals improbably returned 'nil births' in the last reporting period (King 1993:Table B) and of which he says the health statistics are 'almost uniformly worthless' .

Eleven houses with iron roofs, six water tanks and twelve canoes with outboard motors in the village. They only occasionally sell goods at the market in Kiunga. One economic legacy of the long-standing missionary presence in the village is the number of people with extensive formal education; my impression is that this translates into larger urban remittances as well. The village also benefits monetarily from occasional ECP programs held there. Most villagers are devout evangelical Christians. They consider many Yonggom customs to be inappropriate for Christians, wrong, or even evil. Of the last ten men from the village to marry, eight married women also from Atkamba. Nearly 600 refugees settled beside Atkamba village in 1984, but they moved to the resettlement center in Iowara (located in East Awin Census Division, Western Province) three years later... The villagers are very upset about the mine's impact on their environment. They told me how the trees are dying, the river banks are eroding and the currents in the Ok Tedi are rough when the water levels are high. The river is widening and becoming shallow; they find it difficult to paddle a canoe along the river. The grey, sediment-laden water is blamed for sores and grille. People say that some sago palms do not produce starch, only a watery substance. The small creeks are being blocked off at their entrance by sediment from the Ok Tedi and both gardens and tree cover have been lost where sediment has been dumped by floods. The people complain that sweet potatoes and taro grown in gardens near the river do not soften when cooked, but stay hard. They also say that when banana stalks are covered by floodwaters from the Ok Tedi, the fruits open immediately and spoil. Now that they have to make gardens inland, they complain of a food shortage. .. In part because of the refugees, there is little game in the forest to the west of the village. The fish in the river are small and people do not want to eat them because they do not taste good; they have 'no fat' and 'no blood'. There are too few fish remaining in the creeks and streams. They no longer find prawns to eat.

There are 30 clans

Name of clan	Clan leader
Amunian	Joe Wangi
Aran #1	Michael Ukat
Aran #2	Kon Kitamop
Manam #1	Bruce Yokmot
Manam #2	Kambin Yokmot
Demam	Oram Kaworim
Karapkuburan	Robert Wangbon
Kimbiap	Andokin Kitamon
Kurubiran	Donatus Kayeng
Manah	Kennedy Kanonga
Marapka Yumkuburan	Urep Daak
Miripki	Henry Tikam
Moian Okbiran	Kitogop Pop
Namango Karanambin	Rex Owetkok
Dan	Miing Abene

Dan Yatini
Umap
Uu'd
Wambiran Aruawawa
Wambiran Kopkibian
Wimko
Yaad Wambiran
Yenam
Yetini
Yoogi
Yibi
Wambiran Aewan
Miripki Urapin
E'edan Kunumkubun
Koya'a
Kurap

Murat Kenengip
Siombari Kombib
Dinut Kambunip
Atuk Karuwi
Kubun Wetmaket
Max Neknan
Steven Kanip
Paul Nongmet
Tony Daop
Took Gwapit
Peter Nongtim
Kampun Katie
Nanuk Yaob
Diak Biriim
Kowa Berek
Bokotok



Atkamba sores

25-04-05 (from Techa's notes):

No company informing them-land is low and near the riverbank is more fertile, harvest two crops a year but now not -sediments causing water level rise and killing the environment-experiencing sores and itches, always short of food, water currents change,- fear about acid mine drainage, and what will happen 30 to 50 years later, we don't have this information -no benefit from the mine-no information from the company about the CMCA review- clean up the mess and then come to the review-1000 plus people, 3 people sign the CMCA, it is not helping them, they receive nothing-If the mine should continue the PNG govt should get rid of this 9th supplemental -Traditional garden areas were near the river banks but now it's hard to build gardens, they build gardens on higher ground but these are not as productive.- Some of our families are working in Tabubil with the mining and they have made us aware of the problems, we are afraid so the two chiefs have to come down and talk to us and explain-majority of people are not in the CMCA's.-don't want the CMCA's, they need to peel it off, the company must clean off the river system-sand banks forming up are destroying all good flat land along the river is affected, they don't want the CMCA to be reviewed and don't want the company to operate. -we believe our waters and environment are affected with chemicals-Kupunok (mausmary) the government must change the law, the 9th supplemental law and we are now seeking for assistance to set us free, we don't want to see Ok Tedi people, 9th supplemental is not good for us but good for the government, they are only looking for money, to make profit and not thinking of our lives, if they want to continue with the mining they must build a dam, we have suffered enough, mine must stop totally if possible -people were happy that they group had come to tell them of things that they were not aware of - people said that firstly we are lost and you come and do awareness and you make us realise that there is some hope, we only seek assistance from some people to help us set us free, out

of this CMCA signing, we are caught in this trap and how can we get out of this. We are seeking assistance and help to set us free. We are concerned that we are all trapped in these agreements and is there any alternatives that we can get out of this trap.



23 ft dinghy

4/06/05 Atkamba are Yongom people and speak Yongom; their dialect is Kapom. They have 32 clans. The village was never shifted ever since it was founded by their ancestors . Approximate population was 700-800+ and their village councillor is Mr. Niko Bun . They experience flooding when the mining operations started Rough indicators of economic standing and opportunities .There are four canoes with outboard engine and three dinghy with engine five operational trade stores and six semi permanent houses with no water tanks .The only emergency radio is at the aid post .C .Subsistence resources Sago and bananas mainly eaten in the village without protein they do plant and eat root crops like cassava kaukau ,yams however they do faced food shortage or seasonal problems with food availability is common all year round .Mining related -impacts affected local food production and diet through floods and sediments covering the fertile river deltas which they originally used for gardening making impossible to built gardens on high land.D. Wages and income -generating activities No one worked for wages in the village or else where .The people in the village earn money by selling dry coconuts and sago in the markets .No other cash crops however before the mining operations they heavily relay on fishery resources to earn their living .E. Religious affiliations They affiliated with ECPNG no conflict with other religion .Some aid from church - school /aid -post and integral

In terms of sicknesses due to the pollution of the water and the Alice River most the sicknesses that come about are due to the contamination of the River. As a result the common sicknesses that are common there includes joint pain , and body pain. Apart from those sicknesses Malaria is also common.

The problem with shortage of food is a very big problem. Most of the women there said that, only once in a day they have a meal. For instance if they eat in the morning they would sleep in the evening without food until the next day. For them sago is their daily food with fish and all these have been contaminated. In terms of garden food there's not much because all the land where they used to make garden have been over flooded. AS for the sago trees, they no longer produce enough starch anymore as in the past. Often the tope part of the tree is good but the bottom is bad as it contains only water and no starch for sago, even though the sago tree is very big and tall. As compared to in the past today a big tall sago tree only makes 4-5 bags of 10kg rice. Whereas in the past the same sago tree makes 10-11 bags of 10kg rice and it last for 1-2 months depending on how many people in the family which often in a large family of eight ,it could last them 2-3 weeks and small families 1-2 months. But today the 4 or 5 bags lasts only a day for big families and it will take them 2-3 times in a week to make sago again.

At the village of Atkamba most of the women earn their income through selling their local produce and sago at the village market to earn some money for their basic needs. With regards to the prices they charge their goods at the local market mostly it starts from K8 down to K1.00. For

instance for a plastic of sago at the moment they are selling at a price of K2.00 for one. As for them to go to Kiunga to sell their produce, it cost them K22.00 for boat fare which to them is quiet expensive and they could not afford. Some of them usually walk to Ieran a village that is a days walk from Atkamba and pay for PMV for K7.00 and go to Kiunga or even Tabubil. Because of these difficulties only a few of them go to Kiunga once in a while to sell their produce.

In terms of school fee payments, most of them said they sell at market to pay for school fees. In addition to that they add compensation money to the market money to make enough for their children's school fees. The payment of compensation money was started to be given out in 1997. The clan leader goes and gt the money from Kiunga and gives it to the men who distribute it to their wives, mothers and children. So each clan has its own account where the clan leaders go and withdraw. As for the schools currently the school fees stands as:

1. Elementry – K4.00
2. Primary Schools: Grades 3-6 (K80.00); Grades 7-8(K170.00)
3. High Schools: Boarding-K1,100.00; Day students-K700.00

Most of the students who go to school at Kiunga from Atkamba village are boarders while some stay with relatives in town and settlements and go to school.

Like many other villages along the Fly River and in the Western Province, Rubber tree is the main cash crop there. However, it is difficult for the villagers at Atkamaba to transport their rubber to Kiunga. Unlike the villages along the High way where the buyers themselves go and buy them and transport them back to Kiunga.

Mama Groups were given chickens, sawing machines and baking thing they the OTML. At the moment these are not in use as they were not in the interest and likes of the people themselves. The women said that they themselves never request for this things it was the companies own initiative that they gave this things to the women. The only thing that they have submitted for was the chickens. However, the chickens were given without stock feed (chicken feed) to feed, so the women had to give local food to the chickens to raise them which as a result most of the chickens died. So these chickens were only given once. As for the sewing kit and oven for baking, there was no training or workshop given to the women on how to bake or sew and thus most of them do not know how to sew and bake. The sewing kit consists of 6 sewing machines.

In terms of projects in the village there is non in the village at the moment. Those that were given, especially the tanks are bad s they are rusty and could not be use anymore. At the moment they (women) are fetching water in the bush creeks which takes them to walk half a day to go and come back. As for the wells they have dug up nearby, these have been flooded with the water from Alice River. As for the food, in the past like many people living along the Fly River, they make gardens along the River side. There was food all year around and they was no time they had shortage of food. This was because the plains were fertile and most of the time they don't cut bush for new gardens. They only use the same old garden area and replant again. Besides there was enough food in the garden there was also enough wild animals for protein such as wild pigs, cassowary, wallaby and birds as well as fish in the rivers. However, today the women says that all this is gone because of the operation of the Mine. Most of them are not happy and against the operation of the mine as they are now facing a lot of problems in terms of shortage of food and water.

The company has never visited the villages again for this last 6-7 years now. This was because there was a confrontation between some of the OTML's officers who came to the village 7years ago. The incident took place in the village when the women got angry and broke off the airiel of

the Company's helicopter. So what the company does is currently is that he is sending messages through the Councilor when there are things to say.

Most of the people at Atkamaba village are supporters of ENECO and the people believe that ENECO is the one that is going to help them. CMCA- With regards to how the CMCA was signed, the women said that the Company never came into the village and explained to the people what CMCA really was before it was being signed. Like many other women in other villages the women here at Atkamaba said they don't know what CMCA really means or is. There was no information on the media (radio), or booklet, or video tapes that they have seen regarding the CMCA. Besides most of the landowners did not know how they signed the CMCA. The women said that the Company came to the villages 3 times before the CMCA was signed. They came purposely to persuade the landowners to sign the CMCA but the landowners did not want. So what they did was they went through the Village Councillor Niko Bun who was the Councillor at that time. He signed on behalf of the people of Atakamba which was done secretly behind the people's back. That time the Councilor was in town so the officers took hold of him and paid him some money to sign. This was because most of the people there are in the Atkamaba village are ENECO supporters and it was hard for them to get them to sign.

As for Niko Bun he is not a landowner or a clan leader. He is a migrant from West Papua and came and settled there. At the moment he is working as a Public Relations officer for the OTML. As for the people in the village they did not know that the Councilor had already signed on behalf of them until one year later when they heard rumors that their Councilor had already signed. This was confirmed during the Melbourne Court when Rex Dagi saw a list of villages that signed and were eligible to get the out of court settlement worth K40 million for the Alice River Trust.

The women said that people knew that they would get projects as stated in the CMCA papers but they did not want to get these projects. Here is the list of the rightful landowners of Atkamaba village namely:

1. Andokin Kitamon from Kimbiap clan
2. Kamaip Tikom form Miripki Clan
3. Kwen Yomot form Manam Clan

These above mentioned (Rightful) landowners did not want the company and its projects. However, the Councillor Niko Bun signed secretly and they the landowners were not notified about it.

The people have taken the Company to court for the damages that they have done. The people do not want BHP here and they don't want another Company to come and operate the mine. If a new Company comes it should follow according to the wishes of the people. That is, it should not dump the waste/tailings into the River system. The women further stressed that they want the Mine to still operate; however, the Company that comes should have a clean record. The women said they know that the BHP has pulled out but it is still in control in secret.

Names of women leaders interviewed (spokes women)

1. Jarina Kitamon
2. Helen Tok
3. Kubuno Koki
4. Dindu Kano

There were about 70+ women who attended the gathering. This includes the elderly, the young, the middle aged and the children.

Interview with Henry Dikam and group:

Major problems in the community are:

In terms of development, we need a road and a bridge; transport for transporting rubber to market. The environmental impacts have included sediment, dieback, infertile gardens.

Our river system is spoiled, the water and food not safe, and we need proper laboratory testing.

The majority of our members are not happy with these people who signed the CMCA because they are not the landowners or the clan leaders.

We are not happy and really want to talk to the Ok Tedi mine and government officers. We are worse off than we were 10-20 years ago, and are not developing economically. All our resources for survival have been destroyed. We support ENECO in its 3rd court case.

Our concerns for the Kiunga Summit to address are:

The company should build a dam to purify our river system

If they cannot build a dam they must close

We request someone to value our environment and resources (to assess them)

OTML and government must fund our schools with facilities, library, science kits, materials, dormitories, teachers homes, electricity and water supply

We want a permanent sub Health Centre fully equipped with supplies and health workers

OTML should look at us very carefully and support these requirements.

For example Mr. Diak Birim has had skin disease for 3 years, since 2002, and Lux Am has had a sore for 12 years, since 1993.

Kiunga town



Nelson in Kiunga displaying an oxidized stone from Fly River

Kirsch (1993: 14):

There are at least four potential sources of pollution from wharf operations in Kiunga (Don Cooper, OTML operations, pers. comm.):

(1) Leakage of oil and gas and other petroleum products directly into the Fly River. OTML is currently taking steps to recover and recycle these losses. Part of this effort involves lining the wharf with concrete and the construction of a drainage system. Recovered petroleum products will be transported to Tabubil where they will be burned as fuel.

(2) Release of copper concentrate from the copper dryers in exhaust fumes during system malfunction and miscellaneous wind transport of copper concentrate from the storage sheds and during loading of ships. According to OTML, neither of these problems are enough to pose a serious health threat.

(3) After processing, the excess water from the copper slurry line is released directly into the river system. It is obviously in the company's economic interest to have a high copper recovery rate and, given recent improvements in the process, OTML claims that there is little danger that significant amounts of particulate copper will be released into this portion of the Fly River. The company has begun construction of several settling tanks, which should increase copper recovery and reduce the discharge of copper into the river. There may be some confusion regarding this process, because the effluents from the town sewage system are released into the river from the wharf as well.

(4) The reagents used to extract the copper concentrate at the wharf, including frothers, collectors, a drying agent and flocculent. First, most of the reagents are organic chemicals, which break down in sunlight. Second, most will adhere to the products and, therefore, will be removed from circulation. Finally, the amount of the chemicals used is very small – in fact, according to OTML, too small even to be measured in the Fly River.

4/05 from Techla's notes:

Health Officer: Godfrey Bunot:

- If he wants to give us the full report then he must have some time to really go through the medical reports and diagnosis and who are the particular people and what date, which village etc, but the time did not allow us to do that, he is willing to help
- Briefly some disease have been coming up including premature pregnancies, babies, abnormal babies, there is cancer in Middle Fly- thinks there are diseases caused by the mine but must provide you with the written information -malnutrition is common-When we go back for the survey he would have the report prepared for us, (Robin said he would gather all the medical reports and fax them down if possible, Robin also maybe had some information about this) Kiunga:Casper:(he is from Kawok)Kiunga residents are inhaling fumes from the copper drying plan, it is too much in the public place and pollutes our air. We smell the chemical pollution that is too strong, doesn't make us feel goodRubber factory is also located in the heart of town, which pollutes the whole town. All changes have come up fast, our customs change. Waste chemical drainage into the river when there are high tides, they dump it into the river.

They are proceeding with the next case but not on environmental issues, but on bribes and fraud, conspiracies, and the CMCA, which is criminal. ENECO establishment has never been financially supported and is unique -Requesting some funds to support its operations. They have a report, written confirmation of acid mine drainage around Aimbak-Plan to hold a summit to expose the truth to the people about the CMCA's, the survey will help them and then some of the things we have mentioned like organising and work together with other people and come to other ideas- During the summit they will be able to come out publicly -If MPI can help to provide information and do survey, and on what will happen with the impacted communities when the mine closes-Strong and organised, they are with the people; believe they have to fight for people and the environment, for justice- Robin has reports on continuation of the mine for 21 years and an acid mine drainage report for Oboe, and on 10 Indonesians who died possibly impacts of mining- Don't want just anybody coming in, only groups like MPI, they stay with the people, must give reports back- As long as BHP are alive, Yongom people will still be alive.

2.6.05:

WP Division of Health, Kiunga District Hospital, G. Bunot, HEO writes:

Environmental Pollution (Ok Tedi Mining) Related to Health of People of Middle Fly/North Fly District

Just like many parts of the world whenever there is mining of any sorts. There is always a pollution of water, air and soil. Hence the people are at risk no matter how to see or do it [sic] people's Health is always affected whether internally or extremely [sic] due to the chemical wastes, dusts and fumes discharged directly or indirectly into the water, air and soil. Therefore this is what has happened to the people of Middle and North Fly for continuously discharging chemical wastes from Mill Mining Site at Tabubil into the Alice River and then eventually ends up at Fly River. For this as a Health Extension Officer (HEO) base [sic] at Kiunga Hospital, I have seen so many unusually number [sic] of cases either at out patient department and Inpatient with here under mentioned diseases [sic]:

7. Unknown skin diseases/generalised itchiness of skin.
8. Fungal infections especially on lower limbs (legs)—mostly from people living along Fly River Water Bank.
9. Anaemia [sic]—these cases are mostly people living along Fly and Alice Rivers water bank.
10. Protein Energy Malnutrition (PEM)
11. Pre-mature and under weight baby being born—this is mostly from village mothers.
12. Cancers—
 1. Breast Cancer
 2. Benign Prostate Hypertension (BPH)

These cases especially from people of Middle Fly. The most affected age groups between 28-40 years but of course, 40 years and above is usual if less number is seen with one or 2 years intervals.

NB: Beginning of 2004 there was a young mother delivered a premature baby without sexual organs and with no toes. I was called upon to witness the baby.

ENECO Reps: (Robin Moken, Jimmy Woia, Paul Katut, Pastor Max)



With Robin Moken, Kiunga

Robin at ENECO: There was a 4 corners review of OMTL on video. 1984 was the first sign of environmental destruction, when the Ok Tedi turned from blue to milky and had everyone confused. They saw the tailings. The Ok Ma tailings dam. The Stainberg (sp?) report was 1987 and proved cyanide. In 1992 Rex went to Amsterdam to prove this and so was encouraged to take up a civil suit. 1992 was when Robin first heard this in POM and came back from West New Britain to Kiunga for holidays in 1993. Then in 94 Rex filed the suit in Oz. The local people only consulted, then the people en route to the mine. They were all surprised by the dumping and

the dam collapse. PNG Law Journal. There was no environmental department so no environmental plan for OTML. Was the German company liable for strongarming the PNG govt to go ahead after tailings dam collapsed? Gabia and Sam Akatoi were the environmental heroes. The only 2 against the CMCA. 1996 dredge and stop dumping agreement. 40 million cash to affected people north of the D'Albertis junction, 15 villages of the Ok Tedi. Cumulative damage. WB report conducted by OTML itself prompted the CMCA's. Mine closure agreement was changed to mine continuation agreement. Paid off K60-45,000. Risk assessment management report. Kawok Kimokwin and Yogi—only had the report, all voted against the CMCA. In Bosset Stanley Petrus of OTML signed the CMCA. Bongun Village Moses Oti and Alex Maun were all plaintiffs in the first case. Moses Oti is from Bongun and Alex Maun is from Yeram. No clause in CMCA on closing at 2010 either. Robin advises the Provincial Executive Council and the Local Govt Affairs. Jeffrey Onde of the PEC asked him Where are our benefits? Highway villages were bought with one PMV. They signed the CMCA. OYML doesn't need a new CMCA for the next 2 years (or 30 years) of the mine, the national govt agreed to another extension of 20 years anyway. Sam Akatoi is Buka Minister of Mining but voted against CMCA with Gaba. CMCA landowners association between Manda and Obo. Signs of ARD Submerged lake under Fulani is contaminated with cyanide is moving by underground caves to Manda. Peter Steward manages the barramundi project at Obo. In Bosset and Obo Francis Linus and Luke Wabano can help with aid post reports in Bosset.



Child sick after eating 'spoiled' sago at Kiunga hospital

Letter to Nancy Sullivan Ltd
 From Kennedy Kanong
 Atkamba Village
 PO Box 19
 Kiunga WP
 4.6.05
 Ref: Brief Report

I, Kennedy Kanong, a former ENECO rep of the village of Atkamba and a church Deacon would like to share my views with officers.

First Through my observation in [the] mine's life of about twenty (20) years now the Ok Tedi Mining has not taken the seriousness of visibility [sic] study along the river system. When the mine started the company never considered us which affected our environment and life. This made us to sue the company to court in Australia. And our environmental case was never considered. And on top [of] that introduces CMCA for all villages to sign. I myself have no interest to allow CMCA [to] come into my village because under the CMCA knowledge, it says I am selling my rights which I have no right to claim for the future damages from the mine. As far as I know, environment damaged cost the company such a billion kina which they are not able [to] compensate us [for]. To my observation CMCA was done to the understanding of people of the lower Ok Tedi region and as a province. It is a bribery work done only to minority people by the company, which [when] majority of people still support the court case and to overthrow CMCA program in the region. This concerned issue is very sensitive issue and only [can] be solved or complete if CMCA [is] overthrown. Also CMCA caused enemies or conflict within ourselves who are brothers and

sisters. To this very reason my village principle landowners and majority of the people banned all CMCA projects to be implemented by writing a letter to Ok Tedi Mine. Other programs like Trust projects are not permanently implemented which some of [some of which] water tanks, wind houses are already collapsed. To my observation, my village project allocation is rapidly going down which I am not satisfied and want to know where are some of the money. Was it that K40 million deposited not making enough profit? Where did the CMCA funding come from? The lease payment paid to the community is only a transport fee to Kiunga which we need more than that because our survival grounds are polluted. To conclude, I suggest that CMCA be ceased, Ok Tedi move out from [the] mine, and pay us with what was charged and allow fresh company for the better proper development for the region and the province as well.

I would appreciate it if this case be considered.

Thank you,
Kennedy Kanong, Community Rep

The following is the first of a series of medical reports form the Kiunga District Hospital. The remainder are hand-written and their cans can be found in the Appendices. These report swere offered in response to queries about unusual and possibly-chemical-related illnesses presented at the hospital.

11/5/2004

TO WHOM IT MAY CONCERN

SUBJECT: MEDICAL REPORT SIMON PAPA M/36 YRS YULAWAS KIUNGA

Simon presented on the 4/5/2004 with itchyiness [sic] red rashed scaling of general bosity and even pal.s. This occurred after bathing in a creek near the canal about two (2) kilometres down Fly River from the wharf. It was described as very tender when exposed to the heat of the sun. Clinically was geneally covered with red rashes all over and peeling of skin of the general body. He was treated with Phenergan and prednisolone.

He seemed to have suffered some form of allergy.

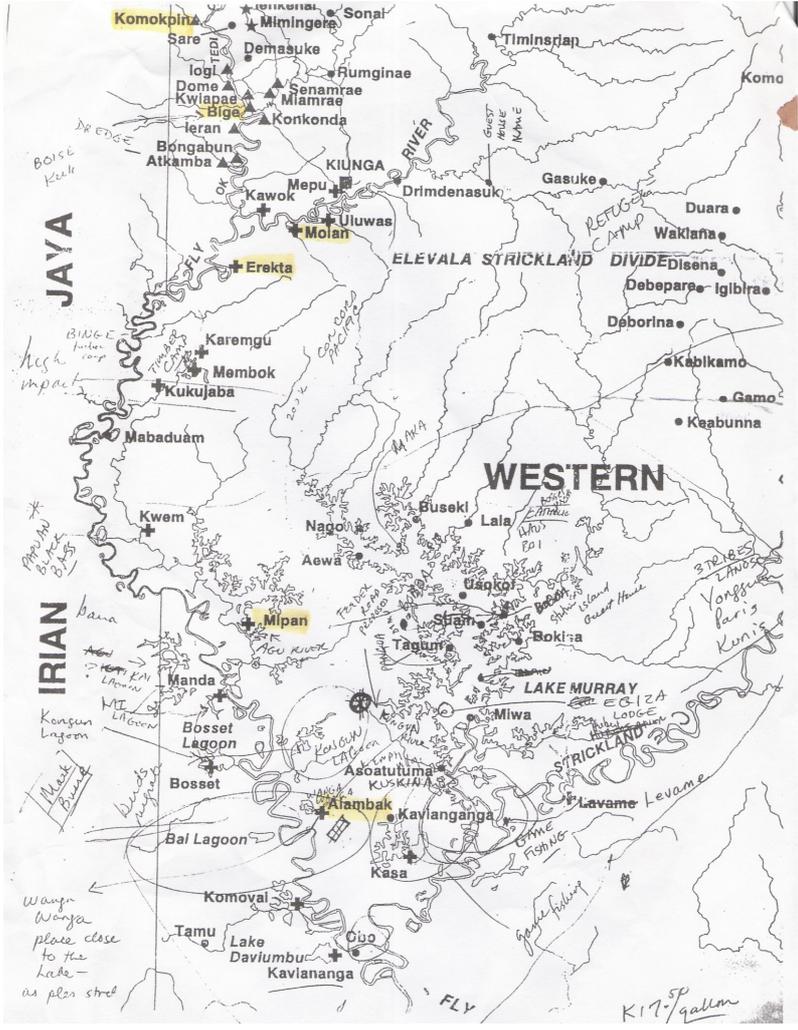
For your informatio.

(signed)

Wode.S.Hawkes

Clinical health Extension Officer

Middle Fly District covers the extensive plains, floodplains and hills of the Fly and Strickland rivers from Nomad in the north to the Fly River delta in the south. The east of the district covers the plains and hills of the Aramia, Soari, Wamoi, Gama, Bamu and Guavi rivers... There is a long dry season south of Lake Murray... The estimated rural population in the year 2000 is 42 000. The district has a very low population density of 5 persons/km² and significant out migration to other provinces. People around Lake Murray and along the Fly River earn moderate incomes from the sale of crocodile skins, fish and fresh food. In most other areas, people earn very low to low incomes from minor sales of fresh food. The Ok Tedi mine has recently paid compensation to people along the Fly River. Sago is the most important food in the district and it is supported by low intensity mixed staple cultivation. South of Nomad, people cultivate low intensity banana gardens. In many parts of the district, more food is derived from hunting and fishing than from agricultural production. In the 1982-83 National Nutrition Survey, malnutrition in children under five years was assessed as poor; 21 per cent of children were stunted and 15 per cent were seriously under weight. (RSPAS 2001:34)



Erekta Village

From Techas notes 4.05:

Contact: Jack Jacob -before the mine comes everything was just as good, we are not any better foof,. -sago has many purposes but at the moment we confused whether to contune eat sago or notm but sago is out staple food, if we stop what will we eat, sometimes now we go hungry. - Use sago for food, leaves for roof and walls but now we find it difficult today because the sago trees are dying out -sometimes we cannot complete a house because our sago is depleting-before our river was virgin clean but now our river is dying Our river banks were sandy but today the river banks are full of mud, we have to push our canoes in mud when travelling or going fishing fisheries resources are depleted. Compensation of k120 is no match to the damage done,. -the CMCA's was never signed in the village, it was signed in Kiunga, it excluded people took the power from people and the villagers didn't have power over the decision-they did not know about the CMCA review-projects given under the CMCA's, the ducks and chickens did not match with what people wanted-When it was signed. people didn't know who signed the CMCA on their behalf when it was signed, (now they know)-as some community members of clans do not benefit from the CMCA packages, the landowners signed the CMCA's and they have the projects, only that particular

family want the projects. -Paul: some were not happy with the 9th Supplemental Act, the 9th Supplemental Act needs to be repealed or destroyed. The river is our life and we drink and eat from it, we live from it. Ok tedi should come and clean and tell us the facts about the river and our environment. If acid mine drainage is true then ok tedi must come and explain this to us. - Experiencing sediments in our waterways, experiencing skin disease and itchiness, mosquitos increasing, - Diseases of pek pek and malaria are coming up- eating fish from the rivers people experience stomach upsets and diarrhoea - people noticed changes in their environment ok tedi do monitoring and assessment of damage done to the environment but never give feedback of their research- instead of telling the communities of the impacts ok tedi gives projects to communities such as ducks and chickens. - new babies and kids not included in the CMCA package, not entitled - a woman gave testimony of disease inside her body and must be caused by eating poisoned foods, stomach upset and vomiting- experiencing difference of fish than what was there, the local fish are no longer there, they are gone, like barramundi are not gone, ones like eels with fins and tails- ten year old boys undergone operation for bladder problems, other children experience bladder problem, had stones in his bladder (kidney stones)- because of eating fish and foods are contaminated they are experiencing body pains- projects delivered to the villages such as ablution blocks were not maintainable-ok tedi environment officials were informed the community to higher ground because sediments were building in the river bed and water levels will rise and flood lower land but people disagree to move-the Fly river was their area for catching food, their resources, normally we catch fish for consumption and for market but this is badly affected and all our fish are gone. - Chicken and ducks projects that ok tedi people never organised any training to villagers before these projects.- low land used for gardening was damaged and food crops grown were not healthy and not productive- ok tedi from its CMCA and projects in activities it breaks communities and creates differences amongst village- CMCA officers came along to conduct signatories for people to sign, they ran a training, told people that it was true, they are afraid of telling all the stories about the reports and information because they are afraid that the company will not pay them, the company has told the CMCA committees the impacts but they are afraid of telling the people because maybe the company would terminate them-low land used for gardening was damaged, food crops grown were not healthy, and not productive-food chains destroyed and fish without blood, fish with big heads and small bodies, fish with worms inside,- ok tedi never informed the communities on the mine continuation and its full effects. Jack – We don't need CMCA review, we don't want the mining to continue, the company should totally stop. I work with rubber trees and I earn money, this compo money is so little, ok tedi should totally stop, we don't need this little money. This tank and this community hall, we can buy it ourselves by selling rubber, we don't need this lousy 120 kina, Ok tedi has been promising us but nothing has been fulfilled.



Membok Village

From Kirsch (1993:18-19):

Membok was founded in 1963, when two earlier settlements, Ungerrem #1 and Ungerrem #2, combined. While the land surrounding the village is divided among Yonggom villagers, the people from Kukujaba claim ownership of the entire area, saying that they gave the Yonggom people their permission to establish the village. Because of the airstrip run by the Montfort Catholic Mission, the aid post and the primary school, Membok is the hub of the three Binge River villages. The schoolteachers maintain regular radio contact with the Catholic Mission.

A long block of rubber trees runs along the wide path between Membok and Karengu, but no one taps the trees because of high transport costs and the low price of rubber. People from the village occasionally take goods to the market in Kiunga by motor canoe, but it is a long journey for them.

There are ten canoes with outboard motors in the village, but trips to Kiunga are infrequent. There are five houses with iron roofs. The last nine village men to marry found partners divided equally from Membok, Karengu and the refugee camp at Kuyu. There are ten graduates of tenth grade in Membok. The villagers are members of the Catholic Church. They hold traditional dances occasionally, usually on calendrical holidays (e.g. Independence and Christmas). They still use divination and curing practices. They attend pig feasts, such as the 1987 feast at Kawok, but have not taken their young men to male initiation ceremonies in other villages, mainly because of time constraints.

The villagers have had few problems with the refugees living at Kuyu camp (population: 800), largely because of the distance between the camp and the village. Some of the landowners of the Kuyu camp site live in Karengu. There have been disputes or fights in the past, concerning hunting practices, for example, but they have been resolved.

People in Membok and Karengu do not garden as extensively as do their neighbors to the north; their major staples are sago and fish. When they do make gardens, the major crops are bananas and cassava; the latter has gained in popularity since the arrival of the refugees in 1984. The people claim that their local environment is changing. When the water level of the Fly River is high, the Binge reverses directions and water from the Fly is forced upstream. While the mud or sediment from the Fly River is not carried as far as Membok, its 'power' is said to affect the local ecosystem. They are not happy with the company because it has been 'spoiling' their environment and they no longer have enough to eat. They are afraid to eat the fish that they catch in nearby creeks. They say that the fish are sometimes very thin, are too white inside, or they have no 'blood'. They also claim to have found fish with what they call 'copper rocks' in their stomachs. Last year a man they identify as a 'German scientist' came to the village and reportedly told them not to eat the fish or sell them in the market. According to the local health care worker (aid post orderly), however, even though people complain about the fish, he has not observed any problems. He also says that the people from the village continue to eat the fish.

Village health status has stayed relatively constant during his four years; there are serious problems with malaria, but it does not seem to be growing worse.

They report that when they harvest sago palms that have been submerged during flooding of the Fly River, there is no starch inside, only water. In contrast, the sago palms found away

from the Binge River are fine. The 'power' from the water in the Fly River is said to affect the plants so that their gardens do not develop properly, the bananas are dry and not good to eat, and the sweet potatoes stay hard even after they are cooked. They say that when animals come to drink from the river, and they catch them and cut them open, they do not have 'blood,' or their lungs are filled with mucous. Otherwise, there is still enough game for them to hunt.

The village lies on a shallow strip of land surrounded by swamps. Sediment deposited at the mouth of the Binge River causes the river to back up, raising the water level of both the river and the connected wetlands. If this intensifies, it is possible that the village will permanently cede ground to the swamps. Currently, natural flooding affects only the low ground around the village and only for limited periods of time. If current rates of sedimentation continue, it is possible that eventually the village will no longer be fit for habitation. Their share of the Village Development Funds amounted to about K20 per person, which they do not consider sufficient. They want more money and more projects from the mine in return for its impact on their environment.



6/05:

Membok village was founded in 1962 when they moved to new location to make access easier for the patrol officers. Their closest town is Kiunga and the canoe is their main form of transportation. Approximate population size is 600+. They have 3 out board motors based in the village, 4 operational trade stores, and plenty of grade 10's graduated from the village. Fish and sago are the main food eaten in the village however not much on a qualitative scale so not much food to eat meaning shortage of food all year around. Mining has affected local food production and diets as floods destroying root crops ,sago stands and drinking water wells. About the water, fish and sago being polluted, this is our main staple for survival. We want the OTML to set up the dam before the mine continues, and if there is no dam they should close the mine. **The CMCA is killing our people.**

People in the village sell fish and sago in the market to earn money no other cash crops to sustain their living .The people belong to the Catholic church and there is no conflict or tension between members of different affiliations. The church provides help with the schools and the aid post . Refugees living near causing problems with sharing resources and have land disputes with refugees . No issues concerning OPM.

Health problems include shortage in diets, maternal health problems, premature babies, yaws , back pain, stomach pain, skin itchy. In terms of health care, the OTML officers visited once but have done nothing since. They should send back the sample reports they collected. They also need a 40 hp motor boat for medical emergencies. Specialists should also carry out patrols for necessary not unnecessary assistance.



Concorde Pacific, near Membok

Membok Karengo Village. Councillor Pais Toron, Yongom tribe.

Membok clans and leaders:

Wugerem clan Mr Nai
Kawok clan Mr Wayuk
Kauwan clan Mr Ronney
Kuribiran clan Mr Alee
Uwan clan Mr Jospeh
Mindikip clan Mr Moyona
Kawbu clan Mr Elias
Yumka clan Mr Caspar
Atco clan Mr Clements

Karengo clans and leaders:

Uwan clan Mr Nelson
Kurininga clan Mr Linus
Gimbi clan Mr Samson
Karengo clan Mr Omo
Mindipko clan Mr Kakuya
Kauem clan Pr Pius
Abai clan Mr Kovetop

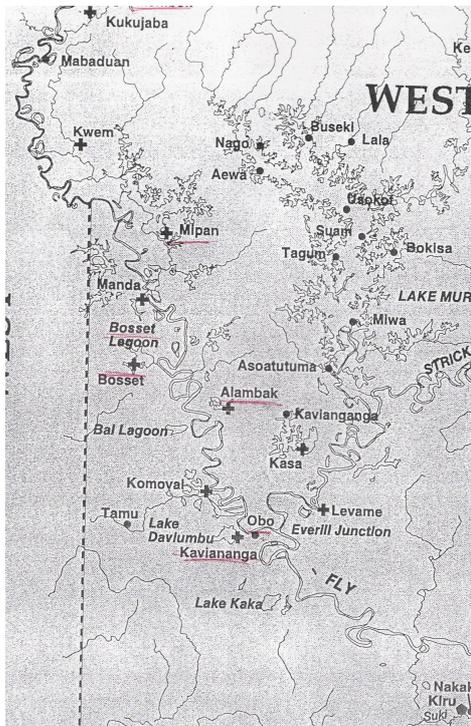
Development has been promised but hasn't come. They need a housing program. OTML should increase the compensation packages. They suggest community projects rather than individual ones. Before it was okay but now because of the company's influence things are worse. They have an off and on trade store, and rubber to sell for money, but no transport to bring the rubber to market. Rubber prices are also very low. They want to government and factory to increase [subsidize?] the cost of rubber and provide transport. OTML is not here to benefit us. We propose a top-up school here in Membok, with OTML and government funded materials and supplies, and teachers. We are not happy with the OTML and government officers and we will approach them for the housing project to be funded because they promised us.

Mipan Village

From Burton 1995:

Councillor Richard Nosail (1994) Recent relocations: Were at Guies, Azo and Doumange before WWII, then went to Gamamit, where there was a Dutch school, then to Mipan in 1954, then to Wiye or Mipan 2 in 1981, the present site. Nearest school: Mipan C.S., a Montfort-run school. Nearest health facility: Mipan Aid Post Nearest radio: Manda

Churches: all Montfort Catholic Mission... Other non-domestic buildings: Catholic women's club, used for sewing & as a guest house. Crocodile farming: 3 small farms, 1 large farm (Ralph Marinus). Another man said he had a farm with 550 crocodiles but jealous villagers broke his pen and they all escaped. Rubber: Was at old village, but left overgrown. None at present village. Vehicles/Outboard canoes n/s Water supply: Four tanks installed by Trust.



Mippan village has 11 clans, and its village councillor is Mr. Kawie. The approximate population is 696. Once the all village lived in lake and in 1980 they shifted to higher ground to get basic services like school aid-post etc. However when on higher ground they find difficulty in finding sago also faced other problems with food shortage and water problem. Their village has been subjected to seasonal flooding Five outboard motors based in the village six operational trade stores no houses with iron roof in the village . There seven water tanks but only using three.Six graduated from grade 10 and 2 in college .They have an emergency radio . Sago ,fish ,pig ,deer and cassowary are the main food eaten in the village this food are the main staple plus some root crops like cassava and kaukau there's not enough food to eat . Mining related -impacts affected food production and diets like fishery resources depleting ,fish without blood or big fish with small tail or turtle with lumps or growth in it's meat so people were scared of eating fish and turtle .Floods destroying food crops and sago . One person works for wages in the village as a elementary school teacher .They earn money from selling crocodile skin⁴ ,getting compensation money .Do have rubber trees but with no assistance from department of primary industry [DPI]

⁴ Note Burton (1995:p?): "The only buyer in the whole of the Middle Fly appears to be Mr Lai Adiwauna, originally of Milne Bay, who lives at Aiambak. He says he would turn over about 500 skins a year from his buying area between Sapuka and Kiunga (note that Suki buyers also operate in the lower area and in Morehead)."

the trees were standing ideal . They belong to Catholic church no conflict or tension between members of different affiliations and no aid or help from the church .

There are refugees living near their village there problems in sharing resources also there other problems like crossing over land boundary and drug smuggling activities taking place there.⁵

Malaria and sik pepek wara .In between 2000 and 2005 there some cases of some death in the village and were very concern that it must be the course of acid rock drainage [ARD] also there is a case of lung ulcers reported in the village . Floods destroying everything sago and food crops destroyed sediments building in lakes and main Fly causing navigation difficult fish stock depleting /fish were poison and water colour change to dark brown . Other environmental problems is logging Concord Pacific . They exchange marriage and no bride price payments made .

They were part of the CMCA The villagers rejected signing the CMCA however the company hand picked some villagers to sign on behalf of the community .The majority of the community are not benefiting, only few individuals.

The villagers are badly affected by the mining impacts; their clean water has turned to brown colour and they once caught big barramundis in their waters but now they are all gone. There are no more prawns to net; miles of big trees are dying; no more wild game; sediments building up and making the river shallow;the river floods the lower land destroying the vegetation .

They are requesting vanilla cuttings and rice seedlings and want skilled carpenters for their housing program, and iron posts and solar panels. OTML should support us by also funding individual projects.

They have a shortage of medicines, and they need a dinghy for emergencies.

⁵ See Burton(1995:8):

The case of the Mandobo may be unique in Papua New Guinea.⁸ They are a linguistic tribe whose homeland is in Irian Jaya, along the Mandobo River to the north and west of the Yonggom or Muyu. A small group today lives at Kuem in Papua New Guinea and are unified by their shared historical experience of being migrants. Although in practice sago is a sufficient staple where they are living today, the Mandobo are more horticulturally orientated than their Boazi neighbours and customarily planted taro and yam gardens. copra; in pre-contact times they were not common at all. The Mandobo say they do not use betelnut 'unlike the Boazi' (though the Boazi grow little betelnut either). Unlike the sister-exchanging societies of the Middle Fly and Morehead District, the Mandobo pay brideprice and formerly used shell money. By their own estimation and also according to Schoorl's scanty knowledge of them in 1956, the culture of the Mandobo is similar to that of the Yonggom or Muyu; their type of pig feasting was, for example, described as essentially the same as in the Muyu area (Schoorl 1993:7).

The Mipans' side of things

I judged it inappropriate to pursue this matter at Mipan, so I cannot give their side of the story. As I note below, the Mipans want help from the National Government to move recent border crossers (not the Kuem people, who have a land grant) from their swamps to the Iowara UN camp to the east of Kiunga. The reason for this is that the mainly Yonggom- and Kaeti-speaking refugees have strong OPM links and draw Indonesian patrols into their sago-making areas. However, it not clear how many of these 'squatter' camps are within Papua New Guinea.

Their cultural beliefs and traditions are dying, they say, because of new churches, and conflicts between ourselves and the CMCA reps for not enough compensation being paid, and also the fact that the newborn are not included in the head count for compensation.

OTML should also be responsible for transferring teachers in and out, for finding teachers for their schools, and paying them while they wait for government salaries.

We don't want to cooperate with OTML because they have cheated us since signing the CMCA. Our drinking and washing water has been polluted and the fish and sago is effected and has no taste.

We are worse of economically than we were 10 years ago. We don't want the mine, and some say it should shut down. Some say it should not shut down. The CMCA is in favor of killing us the resource owners.

We want the Kiunga Summit to discuss:
Fair compensation according to the impact suffered
Increased all compensation packages
Backdating CMCA payments
Our environment should go back to normal
We need all the scientific findings
The OTML Manager must attend the Summit, and not just his reps.

Women's Views:

Women 1: When I gave birth to my two children it I began to feel pain. My first born I gave birth to before the mine started but my second born I gave to after the Mine as come into operation. We the mothers started feeling pain and experiencing things which we never before have faced. These things are getting worst. When women are in their pregnancy period starting from the first month to the ninth month, they will feel abdominal pain with back pains. This they will experience it until they give birth.

Pauline: I heard from one of the women also whom I asked her about how many months she had. And she told me the month she stopped having her period. So I counted the months and it was already ten months and she is still not having her baby. In her tenth month and she is feeling a lot of pain in her joints and back and it get so painful. When elderly women in the village when seeing this they used to say to us that in their time they never feel such pains and birth complications. But today copper has brought a big problem especially to the women. Nowadays when the women want to give birth, it would take them hours and even days for them to have labor pains before they could deliver. It would take them 1 week for even two weeks. And after they give birth the blood won't stop. It will run like water. Sometimes this rubbish of the baby stuck on the skin of the baby or it breaks. As for the babies there's usually this whit-plastic type of thing which stuck on the baby's skin and the baby comes out with it. The mother herself will remove this plastic and after when the women has delivered the baby's placenta will remain inside for another 1-3 hour and still come out. And also there's one case where a women who deliverer her baby, before the baby came there was this black and white stuff that came out first and then later the baby came. It s not the placenta but a new kind of thing that, we do not know. It s like a white round thing that will come out before the baby comes. It is only now that our water has been polluted with copper and we are eating form it that we face a lot of problems in terms of our health. When the mothers who delivered the baby saw this thing that thought it was another baby that the women delivering tried had abort it. But as for us we thought that it's the chemical

that comes out like this. So when we saw that we got scared. Not only us, the women here at Mipan but all the women along the Fly River are going through this same kinds of things that we are experiencing.

Frances: Are there some women here who have died from giving birth?

Dominica: Here in this village two mothers have died during childbirth. And also most babies are not fully formed when they are being delivered. Some of the body parts are not properly formed. AS for one of the baby, it was not properly formed and it has a big hole on its head. And its joints are not strong. I got this baby from my sister who gave birth to the baby after nine months. I brought the baby to the Hospital at Kiunga and the medicals told me, they could not help me. They told me to look after the baby from whatever knowledge I have. So I tried to do it on custom side but it died. I fed the baby with my breast milk and she was okay. Just after her mother gave birth to her she stayed with me for another nine months and she died. That baby was a girl and I named here Nancy but she died.

Xavieria: There was one of my sister her name is Kila Rate and she was going to give birth. When her time came she felt a lot of pain in her stomach. She went through labour for another three days until in the night of the third day she delivered the baby. After she delivered she kept on feeling pains on her two sides. There were two hard things like balls on here sides and also she was having a heavy flow of blood during the delivery. We tried to take her to the Hospital but there was no transport and so she died and her baby is alive and well and is with us.

Frances: Do you feel a lot of pain during your monthly period?

Pauline: Yes, we do feel pain. As from my own experience I should say that before I get my flwo I used to feel a lot of pain in my stomach. All of us here we experience this. We feel the pain as if we wanted to give birth and also the blood flow is often heavy. It will take at least one week or even two weeks. Sometimes we have four to five days. But compared to in the past we only get for 2-3 days of flow. As for womb cancer, none of the women here had a cancer. Maybe, later in 5-10 years time. And also when women give birth the blood (waste) is often dark (black) in color during the time of delivery. Other new kinds of things are happening during the time of delivery. One of my tambu when she wanted to give birth in 2003, she vomited all the rubbish with blood. When she gave birth to her child there was no blood. For us women here it was our first time to see such thing. They brought her to the hospital at Kiunga. As for our mothers they told us they never saw the babies so small and the blood so dark black. The had never seen that during their lives. Now they are seeing women delivering babies with heavy flow of blood which is very black and babies coming with plastics.

Patches of rubber trees were seen in many villages in the Middle Fly, but no rubber has ever been tapped here and in some cases (e.g. Mipan) the village has been re-located, leaving the overgrown 'nursery' behind at the old site. Rubber faces many problems in these villages, not least a conflict between the need to devote steady labour to tapping and weeding and the ecologically and culturally driven imperatives of the sago/hunting camp adaptation of this area.



Bosset Village

From Burton 1995:

Councillors (1994) Romanus Angati, Valentine Vitals... Recent relocations: Busse (1987:130-160) gives a history of Bosset.... From 1934, Bosset was unilaterally taken into the Dutch catholic (Sacred Heart) parish of Bupul and it remained so until the late 1950s. Bosset was still claimed by the Dutch in 1956 (van de Veur 1966:188); final agreement was not reached until 1962 (van de Veur 1966:205). Nearest school: Bosset C.S. (Montfort Catholic Mission agency school). Nearest health facility: Bosset Health Sub-Centre. (Montfort Catholic Mission agency facility) Nearest radio: Mission radio shed; solar radio in Wam Fishing shed for Trust use. Churches: Montfort Catholic Mission Employment: 1 South West Air agent, various paid mission helpers (e.g. a highly skilled cook), 1 Trust supervisor, health staff, permanently resident teachers People outside the District: 1 lawyer + various others in town. People from outside the Dist.: Several long stay Irianese are married here Stores: (a number) Other non-domestic buildings: Various station housing and mission facilities Crocodile farming: Rubber: Old nursery overgrown, new nursery under construction (1 provincial DPI officer for rubber) Vehicles/Outboard canoes n/s. Water supply: Tanks, etc installed by Trust.



Bosset is a big community with 9 clans and approximately a population of 2000+ people and is divided into two ward areas. The closest town Kiunga and main method of transport used is canoe or plane. They don't know when their village was founded. Their village have been shifted due to tribal fighting and lower lands always subject to seasonal flooding but has no plans to relocate on higher ground. Outboard motors: 25(10 community as funded by OTML and 15 private) Trade stores: 4. There are 2 buildings with iron roofs [permanent] and 1 with iron roof but semi-

permanent, with 1 private tank and 5 tanks belonging to the community .There are 3 emergency radios to radio to town. Qualitative assessment were though this 5 community tanks were bagged they no longer in working conditions. They have access to travel to Indonesian side to Meruake so everyone person has a gun and every house you visit has a generator , TV screen and a hi- fi stereo. Two-way Radios :3(Catholic Mission 1, Health 1 and Trust 1). Number of students who completed Grade 10 is over 200. Thereare 2 in university. Number of Bosset people working in OKTEDI: 3. Closest Town: Kiunga. Main transport: Water/plane. Main Church: Catholic

With regards to refugees from West Papua residing at Bosset, there are many. Students from the refugees come to attend schools there.

The main food eaten in the village were sago, fish, deer and pig and on a qualitative scale would be main staple .Seasonally they planted some root crops like cassava and kaukau however not enough food to eat so as there seasonal problems with food availability during dry season and wet season . Main foods are fish, sago and wild animals (deer). Most people live on sago and fish. There are others also who are hard working who also make gardens and live on garden foods such as banana, kaukau and so on.

Affected local food production and diets as floods covered food crops , sago stands and no more fish in the lakes . and thus food shortage is now a big problem for the people especially during dry seasons. The mine affected the food production greatly. In the past people made gardens along the Fly River. Flood has washed the garden areas. Food tastes have changed as all the food has become tasteless. The soil for making gardens longer are fertile as in the past

The major social problems includes, young people taking drugs especially marijuana, drinking homebrew and damaging things in the village.. The women reported that in Domestic Violence is alsothe biggest problem especially for women.

They earn money when they sell crocodile skin and deer horns or sometimes guria at Meruake (in West Papua). Selling fish and prawns to the mission who have a freezer; the women have a women Centre were they sew clothes and sew them--set up the Catholic Mission; compensation money; selling crocodile skin to the mission

The majority of the population are Catholic so no conflict or tension also the helped built a school and sub -health centre and also a mission station was there and an airstrip in place .No refugee living near so no refugee issues.

Major health problems in the village are abnormalities ,malaria ,sharp head ache which has already caused some lives already to this day kidney problems ,abdomen pain and women during labour delivered two placenta some during 5 months of pregnant were discharging blood. The biggest health problem that is faced by women in Bosset includes; complications of child birth during the delivery of the baby, women having problems with their monthly periods. For instance a women had her flow 3 times in that same month., blood cloth, body pains, body itchy, Malaria and asthma. In terms of mothers dying during childbirth there's none but there were a lot of babies who have died during childbirth.

Causes of death that is common there is through Sanguma and other things they do not know. For instance a women died after eating 7 mud shells from the lake.

They were part of the CMCA however there were no proper consultation from the company's representatives on what the contents of the whole agreement was about the agreement was never

read out and explained and those who signed were only given a hour to read through the agreement and signed it without really understand what they were signing.



Bosset

Bosset councilor #2:

I've got some points to bring up.

1. Can the NEC approve the mine continuing for another 21 years? This 21 years we do not know. From what we know its only 10 years. If they say it is another 21 years, we want them to come here. We want the NEC people to come here if they have said for another 21 years. As for us people here we do not know what's going on at Ok Tedi Mining, but as for us people here we will be the victims.

2. Division among the court case and CMCA is created by the people up there and not us the village people. And we feel that they are creating problems for us. We are people here, we live here and die here. The legalities and the differences among the class [action] case and CMCA, we don't understand that. We want all of us to benefit equally. Whether you are CMCA or class case. This is because we will all die here and we share the same environment here.

3. The landowners up at Star Mountains, they must not ignore us. Any agreement they sign they should consult us first.

4. The government and Ok Tedi are only focused on development package only. But to prevent the pollution and the welfare of the people they are not focused on that. The government and Ok Tedi should focus on the prevention of pollution because they sign on behalf of us the people. We were not informed of this gold mine. So they just went ahead and allowed Ok Tedi to dump the waste into the Fly River and now they must look for ways to prevent the pollution.

5. The money that is paid to the government is not spent here in the affected areas. They are our royalties, take to the provincial government and even the open member. He is not giving the money to develop the Fly River. He is using that money to develop the whole of the Western Province. This money should be used only for the Fly River people.

Interviewing Women

Councillor's Wife: Many species of fish are no longer there in the River. Shortage of food is a big problem. And also many of the sago trees in the area are dying. Not long in 3-4 years time all the sago trees will be finished.

Angela: When they came to sign the CMCA here we were not informed

Mr D: Since the Mine over the past ten years we are still living in our bush material houses. Now as you can see when you travel to this island, you have seen a lot of sand banks. In the past it was not like that. Also in the past when our mothers go and collect crabs they would go and sell the crabs at the market and get money. But today it is very hard. There are not many crabs as in the past and women could hardly find enough to go and sell at the market. It is very true that Ok Tedi mine has really affected our livelihood.

During the first five years agreement of the Mine we used to get money through PDF cheques. This has changed in the CMCA and we do not get that anymore. We only get it in the form of projects. And if we want to get a project we have to wait again for another three to four years. Ok Tedi does not look into this matter. Their officers only comes in just to ask us what projects we want. They do not stay in the village with people to get the views of the people on how they want it and at the same time look around in the village. I'm also not happy with some Papua New Guineans who are not concern on whats going on. Its their country so they should help in some ways. We see that not long people will stat to die. And for the people living near the sea, the sea has started to mover up and kill the food in the garden. We used to live only on coconut when there is no food. In the past it is not like this. During our parents time we used to make big gardens of tapioca , banana and sweet potatoes.

Today all these have gone. And also our sago palms usually do not grow as big as in the past. They are very very small. In the past these sago which is washed by the women can hold a family for a month. Where as today, it does not stay long as small ants come and feast on it and it becomes rotten.

As for sickness and diseases, small children are getting small sores on their foot when they walk around. We have asked the Company to build a Health Center and would send our grade tens to colleges and come back and work there. But they have done nothing.

Going back to the CMCA, we are now thinking to change these agreements as they are not very good. Those five to ten years have just wasted to sign up all those papers. This is because they only came here to brainwash us in our villages telling us that we'll do this, and do that for you people but yet nothing as happen. This tanks we have are old one we brought it from the old village. But we have asked Greenpeace with another tank so they have given it to us. Many of the things they promised us, the company did not do anything. There are outside Companies coming to destroy Papua New Guinea, whatever things they were doing it in Australia they should also apply it in Papua New Guinea, and not dumping all this waste in the Fly River. I've been to Australia and I know and seen it. But when those Companies come here they just do what ever they like because they think that we are stupid. We are not stupid we can see. But because of the Government we are destroying ourselves.

Most of these copper ships that come and go have pipes. When going up they use to throw rubbish out and this has caused sand banks. These sandbanks now make it difficult for us to travel along the River. This has also cause water level to rise. When waves come in they move all the way up and destroy everything especially the garden crops. Our staple food is mainly tapioca, and sago. So when the water rise it floods the area.

Mr E: What exactly Ok Tedi has done is that they did not inform us what they were going to do when they wanted to change the CMCA. After each village had chosen 3 to 4 person to represent them, out of the four people they chose only one person to sign. Among those delegates who came here there was also a white person who came and talked to us. He made a good speech

when he came. But it turn out that he did the opposite thing when they went to sign the papers. They changed the conditions on what they have said.

When they first came they said, we have only to prepare the post for the houses. They will provide the nails and the roofing irons and will change all the houses in the village. That they did not fulfill until up till now when the CMCA is about to be reviewed again. Many of the mothers here and myself we are not happy about what Ok Tedi has done to us. They made empty promises which are not good. Out of that CMCA we receive a 40-Horse, a 23 footer dinghy and just recently our youths got some instruments like guitar with rugby balls, soccer and volleyball balls. After that there was nothing. Maybe some of our elder people will die before this things that they promised us will come.

Mrs.F: The money we get from the compensation payment is not enough. The K140.00 that we get can only be spent in one day and the next day we have nothing.

Mr.G: Our water is always mixing up with salt water. And its colour is red. In the past we don't have this type of water colour here. We realize now the before it was our best times. Before our seas and water were clean all through out the year. Now a days the colour has changed to red and it is dirty.

Mr.D: We the young people of today went to school and have learnt a things. We have learnt that our fathers and our grandfathers have signed the papers without thinking about the future generation. And so at the moment we a facing a lot of problems. The biggest problem is that Ok Tedi is not paying us with enough money. The K100.00 they give is a lousy money and it is not enough. They should increase the payment because it has put us in a problem. For example in the past when our mothers cut the sago and wash it, they could make 10 bundles of sago that will last for a long time. But today, from one long big sago they make only 1 to 3 bundles of sago. Before we do not have this types of problems. Also the food crops in the garden are not growing well. The bananas they grow so tiny and when it is harvested it is not good to eat. The yams we planted do not grow as most of them die out. Watermelons which are usually green in their colourskin now has turned brown. So we realize that it is the waste of copper that is dumped into the river and is affecting our food crops and everything.

We live on the coast and most of the time we see the copper vessels going up and coming down the Fly River. On those ships we used to see many men with rubber hose spraying at the floor of the ship as they travel by. The waste that they wash goes down the river and that's how it destroys our sago and food crops in the garden.

The waste has also affected the crabs. The crabs that the women collect do not have meat in them. Although it will look nice outside but inside there is no meat. Crabs, fish sago, banana and other food crops in the past we used to sell and get money from them. Today we have nothing to sell and we don't have any money. Those of use who have children attending schools are facing hard time for school fees. Where will we get the money to pay our children's school fees? There is nothing we can sell to get money for the school fees.



Copper ship, Kiunga

Mr G: In terms of development in the affected areas. Since the Mine has started there is no development taking place here. Housing that is being that has been promised to us by Ok Tedi, now there is nothing being done. Nothing has improve in Western province since the Mine started. There are no proper agriculture businesses on how we can produce. We are only suffering.

Mr H; We are only village people and we do not know how the company is managing. We do not know what sort of poison the company is using. We the people here are not animals.



Bosset

There is no development taking place in Bosset. We should have copies of the CMCA agreement before the review.

Now they have a hard time searching for food and its making families hungry and causing fights. There's even begging now. People are growing old very fast. People escape from the village and province for fear of being effected by the mine. Weather is changing, there are long droughts now and they want OTML to provide a water supply. Perhaps even food and water every month.

Environmental impacts: You can see it with your own eyes, the environmental impacts are a big concern and and issue in our village and province. Tress are dying, sago and garden crops are damaged, the water is polluted and fish are dying.

We are not developing economically but going backwards because we're losing all out resources.

For education we are a bit okay because the Catholic Church is looking after the school and the villager, especially with a water pump and well.

If the government wants the mine to continue the OTML officers should come and explain to us the affected peoplke along the Fly, and not just the Middle Fly people.

Some say they would chase the OTML officers away because they have been cheated and not told what they were signing.

Interview:

Bosset Village has two groups, one is the CMCA group and the other is the lawsuit group. But the villagers don't know where they are standing now. The way they see it is lots of delays, but the middle men or the trustees are delaying too much and the process is too long. They have signed this agreement but there's lots and lots of delays and they don't trust the CMCA or the trustees. The past agreement that they have signed, but the people say they have to do something before they will sign again. They are concerned about the implementation of the CMCA, because they have done nothing yet. They are concerned about development in the community, such as a classroom or health center. Since 1984 there has been nothing. They must fully benefit from the mine because they are on the Fly River. They are polluted and have no benefits, and they don't want Ok Tedi to give them 'spoon feeds' and they want them to comply with their demands. Under the Eight Supplemental Agreement they had the VDF or Village Development Fund allotted by Ok Tedi Trust to look after the villages along the Fly River. But they have only the water supply, all these big tank, and haus win, and that's all that was done. And there was supposed to be another project in that agreement, but it never came to pass. After some years since signing the CMCA, and forming planning committees under the OTDF, they just see a little bit of movement only, and a lot of delay. As soon as the CMCA was signed all the project plans were finished. They say we have a right to find out, who is responsible. But as soon as they signed the Trust abolished the OTDF. They are trying to move out of the Ok Tedi system, but who will go and help them if OK Tedi doesn't? One bad thing OTML always does is when they want to approach them about their rights and damages OTML chases them away. They say we have our rights and go away. Bosset is very nice with the lake but now this is polluted by OTML and all their fish is gone, now they're finding it very hard to fish in the lake. They are trying to live in the village, but some have already gone to West Papua. They walk 3-4 hours to get across to West Papua. Some West Papuans are now living with them because they speak the language. But they say it's hard to move out of these place where their grandparents lived; life is hard now but it's also hard to leave. OTML must do something for us otherwise they should close the mine. But before closing they must clean up the river system, bring it back to normal, and then leave. **The other thing is that before the review of the CMCA agreement consultants must interpret the agreement for them, in a simple language that they must all fully understand.** Often they go or a review and they don't know the language that is in the agreement. They say it's true that these agreements were not fully understood, the content wasn't understood. They want small fishing projects, but all their fish are polluted and its hard for them now. Even crocodile farming has gone bad. According to the general understanding they were promised a better health center, but don't have the facilities in their center, not even medicine. Everything comes through the Catholic Mission and AusAid, not Ok Tedi.

Wangawanga/Aiambak Villages

9/6/05 Aiambak:

Their village councillor is Mr. Elijah Anat it's approximate population size is about 360 heads which made up the 4clans who were the Buaghi group of people who speak Buaghi and Komek their dialect apart of that they do speak English ,Motu ,Pidgin and Malay/Baasha Indonesia .their closest town is Kiunga main method of transport is plane and canoe .Before they shifted to new location because of tribal fighting and later shifted again three times due to changes in the environment . No other plans to relocate to higher ground . Rough indicators of economic standing and opportunities There were 3out board motors in the village one operational trade store .7 people graduated from grade 10and now in the village . You'll hardly find any houses with iron roof in the village .There were 3water tanks in the village which was donated by Oktedi mining company .No emergencies radio in the village but the mining company has one and the Aiambak High School has one .

The main foods eaten in the village are sago and fish; but as sago is destroyed they've gradually started planting gardens to sustain their lives .Not enough food to eat all year around, and there 's always seasonal problems with food availability .

Because of the mine water levels have risen and floods into deltas and lower lands destroying food gardens, trees, fish and sago stands wild games were scare .

One elementary school teacher no one in the village work for wages -base job elsewhere .They earn money from selling crocodile skin which was the only source of income they heavily relied on which they have no other alternatives to sustain from.

They belong to two affiliations Catholics CRC. There were no conflict or tensions between the two affiliations so as there were no help or aid from them too.

People are dying of painful stomach pains and diarrhoea and stool with blood. One incident that was in 1994 a women during labour delivered an abnormal baby and the mother died . Mothers usually deliver babies eight - nine month however mothers there usually have their babies after 12 months .Most women have their menstruation period for more then a week .

Fertile deltas used for gardening covered with sediments making it difficult to make gardens Floods destroyed sago stands food crops and vegetations dieing away.



The South Fly District covers the extensive plains and floodplains south and west of the Fly River, from near Lake Ambuve to the Fly River delta. The south of the district covers the plains and flood plains of the Oriomo, Pahoturi, Mai Kussa, Kutubura, Morehead and Bensbach rivers... The estimated rural population in the year 2000 is 29 000. Incomes are low in the Morehead area and low to high along the south coast between the Oriomo and Pahoturi rivers, and are derived from sales of fresh food, fish and rubber. Agriculture in the Morehead area and on the south coast is characterised by low intensity yam cultivation with some cassava and banana...Sago is the most important food in the rest of the district and is supported by low intensity mixed staple cultivation. On the banks of the Fly River around Tapila, people cultivate moderate intensity mixed staple gardens. In the 1982–83 National Nutrition Survey, malnutrition in children under five years was assessed as poor; 17 per cent of children were stunted and 10 per cent were seriously under weight... Overall, people in South Fly District are seriously disadvantaged relative to people in other districts of PNG. There is no agricultural pressure, land potential is low, access to services is moderate and cash incomes are low.(RSPAS 2001:36)

Suki Sapuka Village

From Burton (1995:41-44): Recent relocations: The major settlement change of the last 20 years in their establishment of Nakaku rubber scheme in which villagers from other parts of Suki have taken up rubber blocks but at the same time needing at least temporary homes nearby.

Nearest school: Nakaku, 6 teachers (all in bush houses)

Aid Post, 3 staff

At nearby Nakaku, Trust has area supervisor and radio hut; police radio at Nakaku with Communications Officer.

Evangelical Church of Papua

Several well stocked stores, notably that of Mr Lawrence Manu. There is Sub-District Office at Nakaku with DPI officers; police detachment of 3 with housing (in poor condition); school infrastructure (all 6 teachers in bush materials houses); some station facilities, e.g. lighting, from Border Administration.

The Nakaku scheme—rubber production ceased ca. 1988-89 and restarted June 1994 with 3½ tonnes stockpiled awaiting transport to the Progress Company factory at Kiunga. Vehicles/Outboard canoes (Not counted—a large number) Water supply: Trust installed pumps/tanks.

Nakaku Station was just as run down as all other government facilities inspected with many vital, e.g. rubber extension, positions vacant and all station housing in dilapidated condition. An airstrip site has been cleared as an alternate for Suki (Gigwa) Station and a means of building up the infrastructure at Nakaku but the strip has not been completed and brought into use.

There are subtle differences in environment and culture, and substantial differences in development between Suki and the Middle Fly Census Division. On the one hand, Suki's lagoonal location appears very similar to Bosset or Wangawanga. But in fact, Suki is significantly closer to the mouth of the Fly so that many indicators to show a much greater degree of economic development and connectedness to the outside world. The presence of government Nakaku Government Station, simple by its presence, contrasts with the virtual invisibility of the state in the Middle Fly... The nearby Aid Post was a large one with three staff, but two were on the point of transfer elsewhere. The six teaching positions at Nakaku Community School were filled, but only bush materials housing was provided. The two police did have houses...[but] the water tanks had long since rusted away. Surprisingly, a working solar system provided lighting to the station houses; it had been installed by Border Administration in Provincial Affairs.

The rubber scheme at Nakaku was started in the 1970s with a land purchase of 2656 ha....



Sapuka baby

15/06/05 Sapuka village is made up of five clans

1. Gikwa clan
2. Koinum cla

3. Zirgu clan
4. Bukaru clan
5. Ikapu clan
- 6.

Their councillor is Mr. Tempol of Ward 10. The closest town is Daru .Inaporuku was their original village, and in 1982 they shifted to Sapuka because were promised infrastructure and other developments. Their village has also shifted due to changes in the environment. December till June it's rainy season and it used to flood.

They have 19 canoes with engines and 2 dinghies with outboard motors. There are 7 operational trade stores, 4 permanent buildings and 10 semi -permanent houses. Several grade 9 and 10 graduates are in the village. And there are 4 water tanks donated by Ok Tedi, and 2 emergency radios to radio to town .

The main food eaten is sago and it is very much the main staple. They also grow root crops and have many wild game so there 's enough food to eat. However there are seasonal problems with food availability.

The mining related impacts on local food production and diet have to do with high tide and floods destroying the sago, and the food gardens; and their fishery resources are destroyed .

Four people work for wages in the village as elementary school teachers, and five people have a wage-based jobs elsewhere. People in the village earn money from selling crocodile skins, deer horns and sago; also they weave baskets and mats to sell in the markets. Apart from that, they benefit from the compensation package money which they receive annually. There are no other cash crops from which they can earn money.

The people belong to 3 different churches: ECPNG, Bahai and Mormon .

Common sicknesses include malaria, skin diseases, yaws, abdominal pains, lungs with holes, urinary difficulty and asthma. ⁶

⁶ Compare the observations of John Burton in 1994 (1994:?) :

Suki health services are run by the Evangelical Church of Papua, based at Balimo. Funding is from the provincial budget, but day-to-day operations are run by the church agency. The ECP runs a Health Sub-Centre at Gigwa Station, built around ?1987. At the time of my visit in August 1994, two nursing sisters had been at Suki since January. Prior to their arrival, the positions had been vacant for six months with a nurse aide left in charge of deliveries and drug dispensing. In August, appropriate drugs were available, but antibiotics had been out of stock for a twelve month period up to May 1994. In other words, the Health Sub-Centre is almost an adequate facility if staffed and properly supplied, but this appears to be beyond the capacity of the provincial health system about 50% of the time. I say 'almost' because the buildings are incomplete in the usual, tiresome way. It has been beyond the capability of the contractor(s) to connect the plumbing so that the sinks, taps, shower wells, and toilets were supplied at some time in the distant past, but never joined to any piping. In any case, what guttering as has been attached to the roof is now broken, and there seems no likelihood of maintenance in the near future. The wards have no beds or bed nets, and while the sisters said their staff houses were adequate, they again have tanks but no plumbing and, in this case, header tanks but no sinks or pumps. Exactly what it is like to delivery a baby onto the concrete floor of a dirty maternity ward, without the facilities for washing before or afterwards, can scarcely be imagined. I would be extremely surprised if infant mortality was anything less than 100 per 1000 and maternal deaths less than 1 in 100 births.

Between 2000 and 2005 there were 16 deaths reported. They were children age between 5 and 17 years, and one old man. They believe that the cause of these deaths was drinking polluted water.

Their water has been polluted
Their fishery resources are depleting⁷
Sediments are building in the water way
Mud covers the river banks
Erosion causes trees to fall off into the river
Other major environmental problems in the area are bush fires and a decline in soil fertility .

From the Executive Summary of Lawrence 1995(vii-viii):

The universal concerns were:

- damage to gardens and village lands caused by flooding;
- reduced fish catches in the estuary and off-river swamps;
- muddy and contaminated drinking water;
- the appearance of diseased fish;
- disease in garden crops;
- the silting of estuarine channels and the appearance of new sandbanks;
- the introduction of *Anabas* sp.

It is very likely that village perceptions do not match environmental assessment by OTML and the Department of Environment and Conservation, but this simply points to a wide gap in communication between the company, the government and the people. English is widely spoken and complex terms are understood but, in all villages, people complained that they were not informed about environmental changes, had never been briefed by the OTML Environment Department and had never seen officers from the Department of Environment and Conservation. Officers from the Department of Primary Industry and the Fisheries Research office on Daru have occasionally visited the Fly Estuary but they are ill-informed about environmental matters and have only created further confusion among the villagers. There was no faith in the Community Relations officer on Daru, whose position was seen essentially as an irrelevance.

Reactions to the Trust

The Fly Estuary is one of the least developed areas of Papua New Guinea. Lines of communication and transport are poor or non-existent, health and education are under-resourced

and facilities within the village, such as sanitation, water supplies and aid posts are primitive. There is no concerted effort to control endemic diseases. There are few economic opportunities in villages and, as a result, high out-migration to 'corner' settlements in Daru is a feature of the South Fly way of life. There was a high level of consensus in villages about the inadequacy of buildings and tanks supplied by the Lower Ok Tedi/Fly River Development Trust. The main complaints were:

- the projects did not reflect what people wanted;
- the building designs were culturally inappropriate (no front verandah and a single sloping roof rather than a gabled roof);

⁷ Burton (1994:?) tells us:

The Middle Fly off-river lagoons, oxbows and shortcuts are (a) principally fed from the Fly, and (b) either slow flowing or static waterbodies highly susceptible to sediment deposition.

- water tanks have earth foundations and linings which deteriorate and leak, are low to the ground and are subject to contamination, and the taps supplied cannot be locked and therefore water can be stolen;
- poor quality flooring, roofing and walls, and foundations which are not embedded in concrete in soft, sandy soils;
- poor or inappropriate fixtures were used, notably soft timbers that rotted, and metal louvres, nails and bolts which rusted;

On the positive side, solar pumps are generally regarded as successful although the batteries have to be replaced and the plastic pipes, laid on the ground, can be damaged or broken. Contacts with Trust officers were the subject of much comment. It is not appropriate for officers to fly into villages by helicopter, make a quick appraisal of village needs and then leave. This is considered particularly discourteous and is much resented. Villagers also commented that many items requested are not supplied and they sometimes get buildings, or equipment such as fishing kits, that they do not want or cannot use. The provision of VDF money raises considerable anger. The money is provided once a year and is almost always disbursed among villagers. This allocation to individuals must be made in cash so a long trip has to be made to the only bank in the area on Daru to cash the cheque. This is also dangerous for the distances travelled are long and Daru has many dangers for people carrying large sums of cash. Payments to individuals are usually around K20 and the money is quickly spent, usually on store goods. Villagers cannot see the point of this money. Women commented that the single most important items for women's economic development are sewing machines and the Women's Fellowship groups say they have often asked for them at meetings. The cost per machine is not great—about K150 for the hand operated 'Singer' type—but, while some had apparently been supplied at the time of fieldwork, the women said the Trust was not responding to them. It was generally the case that villagers conflated the provincial government's Special Support Grant (SSG) funds with Trust projects and VDF money or, even when acknowledging these as separate sources of aid, still wanted to discuss them together. All villages complained that SSG money was given to Daru residents who claim affected area residency status. Applications from villages in the Fly Estuary are usually not successful or the money given is totally inadequate for any meaningful development project. There is no consultation from the SSG Projects Office on Daru with the villages and no follow up on the project development. In the cases of both the VDF and the SSG, women's development issues were also ignored.

RECOMMENDATIONS

1. The operation of the Lower Ok Tedi/Fly River Development Trust should be reviewed. Infrastructure provided by the Trust to villages in the Lower Fly is inadequate, poor in quality and culturally inappropriate. A complete review of the building program in the Lower Fly needs to be undertaken.
2. There is little effective communication between the Trust officers and the villagers in the Lower Fly area. The Community Relations officer on Daru may liaise effectively with government in Daru but does not communicate with the people in the affected area. Lines of communication between OTML and the village people should be improved urgently. Trust officers should evaluate culturally appropriate ways of approaching and working in villages.
3. The options for VDF should be spelt out in much more detail as its purpose is by no means clear to villagers. Similarly, the employment of villagers on Trust projects should be explained again, with consideration given to equal lump-sum payments for equal projects being allocated to villages or sub-villages.

4. In the case of the SSG, it would be appropriate for OTML to seek support from the peak industry body, the Chamber of Mining and Petroleum, for SSG programmes to be given visibly independent management and for proper accounting procedures to be demonstrated.
5. Women's development should be taken seriously. The women's social networks are extensive and can be utilised for both education and public relations purposes. OTML should employ women to manage a women's development program targeting women's issues.
6. Environmental information must be provided to villagers directly; it cannot be assumed that the Provincial or National Government bureaucracies are able to provide anything more than second-hand and inaccurate information. However, there is a high degree of distrust of OTML in the villages and it is not recommended that OTML Environment Department officers approach villages at the present time. Considerable liaison and public relations work needs to be undertaken before information programs commence.



Erosion in Sapuka

Kiwai villages are built close to the sea, or on narrow rivers and waterways. Houses are small, consisting of two to three rooms, built of folded nipa palm walls and a sago thatch roof. Floors are black palm; struts and supports are made of mangrove. The houses may look flimsy but are actually strongly built, cool and can be broken down if necessary and rebuilt elsewhere. In the northern part of the Fly Estuary villages are physically different. People use plaited sago canes woven into broad screens rather than nipa palm for walls. This is a Gogodala custom that has been adopted by some Kiwai in the northern part of the estuary. These walls are more attractive, but are not as water-proof as the closely folded nipa palm. Kiwai villages vary tremendously in their internal dynamics. Some are noisy and full of life, others quiet and sleepy. By comparison with societies higher up the Fly, the Kiwai have a richer and more complex material culture—their canoes have elaborate rigging and they make and maintain a much wider range of baskets, nets and other fishing equipment—lending a 'busy' air to their villages. Consequently, their ability to travel within the estuary and by sea over considerable distances and their long tradition of contact with other cultures (Lawrence 1994:259 ff.) means that the Kiwai are unusually well-informed on many subjects and have a good awareness of development issues.

6/05 Interview with Jonathan Kwari:

We are not benefiting and developing from this CMCA socially or mentally; instead we are dying. Copper is being washed over our grounds by waves. New diseases like itchy skin, babies with big heads, yaws, premature and abnormal births. Our people are dying from eating sago and fish. A week ago a family was airlifted to Kiunga Health Centre after eating sago, they were nine in the family and two died and seven were rushed to hospital.

We are not happy with the OTML officers and don't want to see them. Our life has gone backwards. We agree for ten years only for the mine to continue and not beyond that.

Our main concerns are:

Development

Environment

CMA compensation

We want the Kiunga Summit to discuss environment, compensation should be measured against environmental impacts. We don't want a middle man, or outside people representing OTML. OTML must stop operating and clean up the mess before they leave. We need lawyers to help us sue the company and the government.

The lagoon people [the Boazi, Zimakani, and Suki] are closely related in culture, social organisation and the form of their ecological adaptation both to the 'canoe people', or Marind Anim, of the southern border area of Papua New Guinea and Irian Jaya, and east to the Gogodala people of the Aramia River...[T]he lagoon people live to the south and west of what [anthropologist Mark] Busse describes a 'major cultural divide'... To some extent, this cultural divide follows the line of ecological transition from the open forests, savannahs, and swamps of the south to the low ridges covered with rainforest to the north... The divide separates people with radically different cultural orientations. To the north and west live a congeries of peoples who formerly made financial transactions with shell money, paid brideprices for their wives, lived scattered among their forest gardens, and feasted at major pig killing festivals. ...None of the lagoon people placed emphasis on the exchange of wealth items, on pig production or on the achievements of 'economic' big-men, whose leadership is typically achieved through traditionally sanctioned competitive feasting and exchange... Leadership roles were traditionally assumed by senior men of the clan, men possessing important ritual knowledge, and men who led raiding parties.

Kavianaga Obo



From Burton 1995: Nearest school: Level 4 school in the village, 9 teachers, run by ECP Nearest health facility: Health Sub-Centre at Obo (1km) Nearest radio: Obo OTML radio with radio operator Churches: Evangelical Church of Papua Employment: In the commercial fishery, possibly some employment at Obo in connection with shipping. Mr Peter Gelau has a trading establishment at Obo and may also offer some employment from time to time. People outside the District: Several of the elders had been policemen, one had been a member of the Area Authority in the 1970s, two had been members in the Fly River Provincial Government in the 1980s. Thus, there is a good deal more outside experience here than in other villages. Present absentees: unknown. People from outside the Dist.: A handful of residents were born in West Irian and either grew up there or at Bosset, before settling here. Stores: There are several stores here. Other non-domestic buildings: Obo landing place: the fish freezer shed, a generator shed, radio houses, an OTML house (dilapidated), a petrol lockup (illegally close to the OTML dwelling), various outbuildings. Obo Health SubCentre: housing for health workers, etc. Kaviananga School: 4 double classrooms (1 wooden, 1 fibro, 1 bush materials, 1 built by Trust), only one L40 teacher's house (rest: bush materials). Crocodile farming: 5 projects.⁸ Rubber: First planted 1976, last sales 1986—1 plantation at Kasa village, 1 at Obove, 1 at Bongoma Ck. ca. 25 km down the Fly. Vehicles/Outboard canoes A comparatively large number, mostly kept at a canoe place in the village. Water supply: Trust tanks, pumps etc. This is an extremely large village complex, somewhat like Bosset, but with a good deal more economic activity and therefore resembling Suki more than another place in the Middle Fly.

⁸ Note Burton (1994:?) on the crocodile business in this part of the Fly:

In 1994, the Suki store owner, Kayama Sinba, was also the most prominent crocodile skin buyer of the district. The crocodile industry has a three-tiered licensing structure. Hunters obtain a licence to take crocodiles from the wild and feed them in village pens; licenced buyers may purchase the skins from the hunters/farmers. Finally, licenced exporters can sell to an overseas buyer. Two other licenced buyers are located at Sapuka and Gwaku villages, but evidently all exports pass through SITA, which holds the only export licence. Licences are issued by the Department of Environment and Conservation's Wildlife Division. SITA sells directly to Inoue & Co of Tokyo, graphically illustrating the connectedness of the Suki economy to the world economy. Kayama Sinba travels quite frequently to Port Moresby for his business, which by-passes Daru entirely.



Interview with Veronica Kelena age 25, secretary Aiambak High School:

F: Does OTML have sponsorship programs for students here?

V: Yes, they do have them, which is for the preferred area scheme. This is for those going to colleges like for nursing, teaching, business and agriculture. But it's very ...because to get sponsored it's whom you know who is working there. Even though we give out acceptance letters still we do not get accepted.

F: Under the CMCA agreement they do have some programs in terms of sponsorships for education.

V: Yes they have these types of sponsorship programs for students going through agricultural, nursing and teaching colleges, and also business college. But they are giving first priority to agriculture, teaching and nursing because after the mine closes they want these areas to be in place before they leave. Whereas for business it's not given much consent or priority. So those of us who wish to take up business they told us that we have to look for some other places for sponsorship.

F: At the moment are they sponsoring some students?

V: Here at Obo there's none being sponsored. We have some applicants here who have written to OTML but we did not get our reply. So far three of us here at Obo have applied but there's no reply.

F: Are youths involving themselves in drugs or alcohol?

V: Yes they do but most of the time when they go to village court the magistrates and village councilors used to say that because they have been neglected they get themselves into such things. For instance, my nephew, my big brother's son, he himself wrote to them and we both went up to Tabubil and he sat for an entry test. After he came back he waited and there was no reply. So he gave up and went roaming around doing all kinds of things in Daru for 1 year. This year he came back and now his mother took him the second time back to Ok Tedi and now is upgrading his mark.

F: Do the VPC bring these concerns up to the trustees?

V: I don't know but one of the trustees told me that the VPC don't make any effort to bring up the youth concerns because maybe they find it hard to put up or bring them up during the meetings. Sometimes the failure is with the VPC Chairman because they don't really look into the youth issues. As for females who have completed High School there are many but they have not got a chance to further their education. Most of them completed grade 10 and are now living in the

village. So when they stay in the village they depend on the family (parents again). But the biggest problem is that there's no money for school fees. Even though we get the compo money its only a hundred kina yearly. The compo money the other people get, they could not contribute together and help the students who want to go to school. This is hard because they say that they money they get is only for them because the copper has damaged our body so its for our body and we cannot help you. Some good parents they get compo money, sell things, and get money to send their children to school. With regards to social activities like sports, the company does not look into assist in supporting such activities. For instance in 2003, I ran a volleyball game here. I wrote to the company asking for them if they could provide seals and trophies for the games after it is finished. But they said nothing. They never reply back. Some of the girls have gone to grade 12, some went to college and university but have come back to the village. I was the only one sponsored by the company to do my secretarial at Lae Tech. They told methat after I finish my schooling Id go and do my practical with them. But after I finished they never got me for my practical.

F: According to you and other youths in the village, are you satisfied with what the company is doing in terms of providing things?

V: As for most of us, we are not satisfied with what the company has been doing. They only neglect us. When they come here they used to promise us saying they will give this and that. We used to wait and wait and there's nothing. For this past many years nothing has been given or done to us the youths. Just only once when they came to run a volleyball clinic they gave me a volleyball and a ball pump and a whistle. This clinic was run by the National Sorts Institute which the company sponsored.

F: Do you think most of the youths are concerns about the damages due to the impact of the mine?

V: Yes, many of the youths are very much concerned. Regarding the ARD issue, most of the youths are questioning their future and their children. They're saying, What's going to happen to us and our future? As it is their biggest concern and worry. But the company is telling us there's nothing going on. Everything is fine, you can eat from the river water. But as far as us we see that it is not safe for us. We are now scared to eat fish in the Fly River and also wash there. But the company's officers are saying to us its normal and you can still eat and use the river. Even our trustees are telling us the same thing that the water is good and everything is normal. The trustees have already been bribed by the company with lots of money. So they have closed their mouths to speak. When they come to the village they used to trick us but we are not stupid, we know what's going on. We see the environment and we know what's going on. We see the environment and we know that its not safe for us anymore.

F: Do you think the company is bribing the trustees?

V: Yes, definitely the company is bribing the trustees. They give them big money. But whwn we speak against them, they too have their own ways to track us down. We know that they are doing this. So they ask us how much do we want? And they used to give us a grand (K1000) which is not enough. As for us people, we know that our leaders have been bribed by the company to shut their mouths. And we the grassroots are left in darkness and we don't know what's going on at our back. The VPCs are also involved. But not the councilors,, as they're on the village level with the people. Mostly they don't bribe the VPC Chairman but the Middle Fly Trustee is the one they bribe. Definitely, they bribe him.

F: That time the OTML officers came here what did they tell you about the ARD thing?

V: This thing happens or comes out during dry season. The sun used to shine on that thing and the sulfuric acid comes out as white. So they said, also that when it is high tide this thing doesn't show out so it is okay they could eat and fish in the river there. It's normal. And this thing is controlled up at Bige and you people should not worry about it. We know and we told them that this thing happens from the sediments in the river. But they told us that they control it from the dredge up at Bige. But they told us that these ARD they are seeing is from the logging company Concorde Pacific at Aiambak. They blame them saying the logging company used to put chemicals on the logs so when they tried to put them on the pontoon the chemicals poured into the river. So that is where ARD is from. They never admit that these ARD is from the sediments. So they are blaming Concorde Pacific. And they further went on to say that they will negotiate about it (ARD). OTML said they will negotiate which means that they will compensate the people to shut their mouth. The company told the people to tell them how much they want and they will pay for it. The people had not yet chosen an amount. And they have given them conditions. If they don't fulfill their promise the people will do something. When this issue of ARD first came about the people were so angry and planned to stop the ships from traveling up and down the Fly River. When the OTML officers came they nearly belted them up. But the councilors stopped them, saying that the CMCA had its laws. If the company does not meet people's requirements or demands by September the people will take action. So they say that they controlled the waste through the dredging machine at Bige. But we told them that although they are controlling it at Bige, what about those ships traveling up and down with copper. When the wind blows and the boys on the ships wash the copper dust on the ships it falls into the water so it must have build up and is washed down.

F: As for yourself, what do you know about the CMCA? What is your understanding of the CMCA?

V: With regards to the CMCA, I do not know what the CMCA really means. They did not explain it to us so most of us do not know what it is all about and what it means. Many of us youths know nothing about that. Meeting after meeting those of the trustees travel on Regional Air to Tabubil but yet when they come back they never told us what's going on or what they have discussed. That is why we do not know what the CMCA really is. We only know the name. Its meaning and what it's all about we don't know.

F: Here in this village (Kavianga) did they sign the CMCA?

V: Yes they did sign, it was the leaders. After that signing we still do not know what the CMCA is. Only these several leaders that jump on the plane to Tabubil and back.

F: Did the OTML officers come and make awareness to the people what the CMCA was before the signing?

V: Yes, they did come for almost one year they were going back and forth telling the people that they should sign. They was a year before (1999) the signing. But we the people did not want to because we saw that everything was already damaged, especially the river and the lakes. They only want to mine to close. But then the company gave them conditions, say to them: if you do not close it we'll give you people money. So when the people heard money they said it's okay they would have the money. So the trustees who got the money to give it to the village people got half the money and gave the other half to the people, which they shared among themselves. So each person got K500 per person. That was the first time, in 2002. From there onwards up until

now we only get K1000. We used to get it in the beginning of the year in January. In 2003, 2004 and now in 2005 we got only K100.

F: Who were the people who signed the CMCA? Is it the clan leaders or just ordinary people from the village?

V: These were the clan leaders from each clan, that signed the CMCA. These they took from villages along the Fly River that is from Obo to Asha and up to Oha (sp?). These clan leaders that went up to sign were bribed. Because the company told them they they would give them K20,000 to 30,000 if they signed the CMCA. So after they signed the first 10-20 people were given K2-30 thousand. They were paid already. But there were about 7-10 people who did not get that K20,000 who were left out and reported others to the villages. What the company did was it told the people just to sign. After they signed and they brought the papers to us we found out that if we want to sue the company it would be hard because they already made a law. So we see the company must have written the laws and got the people to sign. Before the signing they did not see the content or read it. Just after they signed they read it and found out they could do nothing about it. So that's what they came and told us people. That time not many people were there, only a few of us were there and heard about it. Many of the people in the village did not know about it. Only a few people were there and those that are educated know about this but the majority does not.

F: As for the women here, do you have any problems when having your periods?

V: Yes we do have. Many women have these stomach aches, and also the cases of women having appendicitis (?) is many. More of the women went to the hospital for it.

F: In terms of food, do you have shortages here?

V: There is shortage of food. All the sagos are finished and only a few are here. The population is very big here, that's why sago trees have all been cut down. Although they used to plant food in the garden the food crops do not grow properly. Before we used to make gardens near the river and it was good. The food crops grow well and produce a lot of food. Now you cannot make a garden near the Fly Riverbank. Nothing will grow. With regards to fish, we often see (?) an dgreenish types of things in the body of the fish. We also see this on their skin. When we see this we the village people used to say that its copper and we don't eat such fish and throw them away. We usually see that if the fish have sores and marks on their bodies we do not eat it. But those that don't have such symptoms, we eat them. Some of the fish in the river are dying and floating on top. For instance, the last time we came down from the river we saw a big barramundi. It died and was floating. We report this to the officers of OTML when they came last time. We told them about the fish dying and they said its still okay. They really made people believe them that it was still okay to eat the fish. They said it to the people that these fish are dying for nothing. It is not the ARD.

F: So what's your view if the mine continues for another 21 years, which is what they say?

V: I think that if it continues for another 21 years we the people living along the Fly River will have no food and all the fish would all be gone. As for us people here in the village at Obo at the moment all our sagos are finished and we have nothing. At the moment we are buying sago from people living inland and upriver. So I think that if they want to close the mine they have to 'stretim sindaun' and help us improve our living standard first. They had promised us good housing, water supply, and all the students should be sponsored to tertiary schools and colleges

and universities. And they should increase the compo money for the village people before they leave. They should give more than a hundred. One hundred is not enough. Now you see us we are not okay. All our body has been damaged by chemicals. Because most of the people are getting all kinds of new sicknesses. Most common sicknesses include stomach aches, appendix (?) and cancer. Recently one of my aunties died of breast cancer. As for the men they have problems with their bladders. Many got this bladder blockage. Many have teeth problems. Their gums are swelling. Even young kids have their teeth coming out at an early age. This problem is common from you to old people.

F: What are some of the ways that the company has set up for the people to earn money for their basic needs?

V: The company has only the fishing company, which is run by a white man. However, the company and the OTML have made a joint venture. So if we want nets we still have to buy from the fishing company. And catching fish and selling, we have to pay back credit.

12 /6/05/ :Kavianaga has an approximate population of 1500+ people and is made up of seven different clans. They are the Zimakan tribe /group of people. There are 2 ward councilors, Simon Kela and Tom Andiu .Their closest town is Kiunga and main transports are canoe and plane. In 1972 they moved to new site for educational opportunities. The village is subject to seasonal flooding . There are now 12 containers in the community filled with roof irons for semi-permanent houses. The company did not supply other materials. Just iron, nails, saws and hammers. They have been asking Ok tedi for a good water system but OTML says their water is good to drink as it is. But the Eight Supplemental Agreement has allowed OTML to pour 80,000 tonnes of sediment into the river and now the CMCA's allow them to pour another 100,000. So the water there is a problem for them and they carry water bottles everywhere they go. Even going out to make sago, it needs to be washed by water but now women bring bottles of water out to wash it. They use the well water for everything, washing and cooking.

They used to go and wash in the river, and do their laundry there; but not any longer.

There have been two men—one from Komovai and the other from Kavianaga—who ate the catfish from the river, got sick and then died. The cause was the chemicals in the water, because they live downstream from the mine. Ok Tedi has not monitored these issues, they only monitor the dieback and sediment. Nobody is looking into the levels of chemicals in the fish. Same as sweet potato: in 2002 a New Zealand scientist said the sweet potatoes were safe to eat, but right now they don't know if they are or not.



Obo man shows one of two stones surgically removed from his body, with medical report

Some women have abnormal pains and some have stomach abscesses, and have gone for operations. There are 24 of them, these new types of sicknesses which never came before the mine. The men are having appendix problems. The ladies have abnormal pains before giving birth, and babies are born without ears, nose, mouth and buttocks.

The water is a very big problem now. The tanks the company gave to the community are not enough to serve everyone. When it's rainy season they use tank water to cook and drink, but when it is dry they go back to well water.

Sometimes they wake up in the morning and walk down to the station to get water from the health centre's sola pump tank.

Sago is the other big problem they face. The water floods the sago swamps now. The places where sago grows are all filled with these chemicals and the sago is no good to eat now, but they have to make it anyway. When they go and scrape or beat the sago it comes watery, so they don't get enough to eat. They have so many sago swamps but most of them have died because of the chemicals. And when the water is very low, as in 2002, they see lots of dead fish. The fish they used to eat are mainly gone now. Even in the eighties when they had droughts, or before, they would have low water levels but never see so many dead fish. Nowadays the water is also very black.

Once they went and asked OTML to improve their health services and schools but OTML said they were giving them a lot of money through the provincial government; it's the government's duty to come and improve the services, not theirs.

Now they have an association in the village. But through this CMCA they have formed another association, it's sort of a protection, and it supports the CMCA's: they call themselves Zamby Association.

When they want to go and put their demands to Ok Tedi, OTML says you cannot come to us directly, you must go through the process because we are working through the CMCA's. So you have to go through the Zamby Association and present your demands. They tell the complainants that their approaching them means they are questioning the legality of the CMCA's. So now it's very hard for them to go and talk directly to OTML. When they put pressure to them, OTML tells them No, we cannot do anything for you, you have to get another association and come to us through them.

So now they are looking for outside support like an environmental biologist or scientist so that they can combine or gather together, and do a study on their resources. So they will know what is wrong and they can stand in court against the company. Then they will have enough power to court the company for damages.

The Eight Supplemental Agreement makes them sacrifice payments for when their gardens are spoiled, because the company will pay compensation instead. But the company didn't do what they promised. The agreements that OTML want the people to sign were not legally interpreted before they were signed. They told us that it is not on the public agenda and the company will not disclose any information in the agreement unless it's passed by the parliament and made public. But they didn't agree. Any agreement which will be done by CMCA committees or the Zamby association must be made public, the community says. Now they know what Ok Tedi is doing using the people. But the CMCA committees went and signed this agreement understanding that there will be no more problem with the mine.

There are five canoes with outboard motors based in the village, fourteen operational trade stores and seven water tanks. There are a few grade 10 graduates from the village .Also there are three radios to radio to town in case of emergencies and they are operated by ECP, Ok Tedi Trust and the Health Centre.



Kavianaga deer meat

The main food in the village is sago with not very much fish because they have planted other root crops like taro, cassava , sweet potatoes and yams as substitutes for sago and fish .Also they eat plenty of deer meat .There are seasonal problems with food availability especially during drought when food crops die.

13 people work for wages in the village and 2 have a wage-based jobs elsewhere .They sell crocodile skin, fish[catfish] and prawns to get some money. Also they benefited from the general compensation package money which they receive annually on December--about K100./head.They do not have other cash crops so they relied on fishery resources in the past.

They belong to three church ECP, 2CM and Global ministries. There are no conflicts or tensions between the affiliations, but also no help or aid from the churches .

Major health problems include: dental problems, eye problems, arthritis, abdomen pains (especially women), urinary difficulties (especially boys age between 6years and 12years). Michael Joseph survived two abdominal operations. The first one was on the 6/ 2001 when a small stone the size of a marble was removed; and the second operation was on the 17 / 2/ 05 when they removed a big stone the size of a tennis ball .

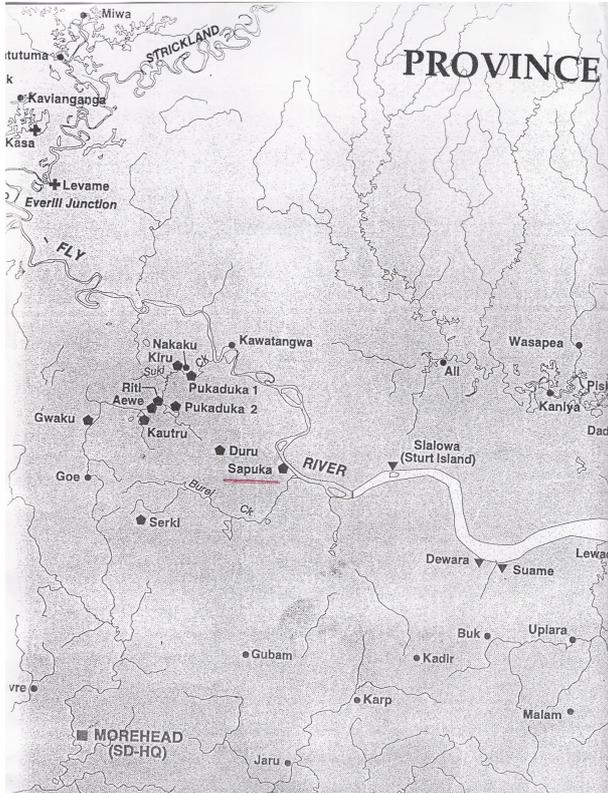
The environmental impacts include:

- water contaminated
- floods flow into the lake and lower land
- local fish species have gone extinct
- water colour in the lake turned to black

The social problems they face now include marijuana, polygamy practices on the increase 'like wild fire in the community,' and arms smuggling. The CMCA is causing division in the community, too.

Their shortage of clean drinking water means they have to walk for a kilometre to get clean drinking water .

The interviewers said the CMCA is like signing a death certificate. They also want Ok Tedi mining company to improve village health services, and provide food rations to affected villagers. Before any agreements that has to be signed is signed there must be a lawyer representing the land owners now.



The South Fly District covers the extensive plains and floodplains south and west of the Fly River, from near Lake Ambuve to the Fly River delta. The south of the district covers the plains and floodplains of the Oriomo, Pahoturi, Mai Kussa, Kutubura, Morehead and Bensbach rivers. Average annual rainfall ranges from 1500 mm on the south coast, to 2200 mm around Suki. There is a long dry season in the entire district. Altitude varies from sea level to 100 m northeast of Wipim. The estimated rural population in the year 2000 is 29 000. Incomes are low in the Morehead area and low to high along the south coast between the Oriomo and Pahoturi rivers, and are derived from sales of fresh food, fish and rubber. People in the Wipim and Kondubol areas earn very low incomes from minor sales of fresh food, fish, rubber, betel nut and crocodile. Agriculture in the Morehead area and on the south coast is characterised by low intensity yam cultivation with some cassava and banana. There is one planting before a fallow period of more than 15 years. Sago is the most important food in the rest of the district and is supported by low intensity mixed staple cultivation. On the banks of the Fly River around Tapila, people cultivate moderate intensity mixed staple gardens. In the 1982–83 National Nutrition Survey, malnutrition in children under five years was assessed as poor; 17 per cent of children were stunted and 10 per cent were seriously under weight. The most disadvantaged people in the district are those in the Wipim and Kondubol areas who earn very low incomes. Most other people in the district live in low potential environments. Overall, people in South Fly District are seriously disadvantaged relative to people in other districts of PNG. There is no agricultural pressure, land potential is low, access to services is moderate and cash incomes are low. (RSPAS 2001:36)

Doumori Village

17/06 /05/ Doumori village is made up of the Gaugau group of people and has 7 major clans they speak Kiwai language also they speak English ,Pidgin ,Motu and Gogodila .Their village councillor is Mr. Edi Wamaro wad 6 Kiwai local level government and Daru their closest town . Before were at Madeira because of tribal fighting moved to Doumori .They experience flood every month .

Approximate population size is 713 people that was census update on 10/05/02/.



Domori

Rough indicators of economic standing and opportunities

- There are 22 outboard motors with dinghy
- 2 operational trade stores
- many grade 10 graduates
- 3 permanent houses and 2 semi -permanent houses
- 8 water tanks
- no emergency radios to radio to town

Subsistence resources

Their main food is sago and on a qualitative scale of main staple .
Not enough food to eat all year around .

Wages and income -generating activities

2 people from the village worked for wages in the village as elementary school teachers and one community health worker[CHW]. Many of them over 40 have a wage -based job elsewhere .
They heavily relayed on garden crops sell them and get money no other cash crops .

Religious affiliations

Two church in the village ECPNG and New Apostolic church there are no conflict or tensions between the two church and also no aid or help from them .

B. Health problems

Young people age between 25 and 12 years are having problems with their eye sights .Shortage of nutritional diets is very evident . Yaws very common ,tropical ulcers 3 babies born deform some born healthy but after 3 months became disable .

C. Major environmental impacts from the mining .

- fungi develops in sago after been stored away
- bananas grow thin

- catfish grow tin from the tail and its natural taste is no longer there
- very difficult to catch fish
- local fish species depleting
- turtles is extinct
- high sedimentation in river beds
- creeks and drinking water destroyed with floods
- big land has eroded in the river caused by big copper ships travelling up river and down river
- copper ships washing copper into the river



Erosion in Domori

Other major environmental problem is short fallow period for gardens ,leading to decline of soil fertility .

Social problems

Not that serious but drug trafficking and gun smuggling is very serious leaders seems to have no control on that .

They have signed the CMCA however they were badly informed on what is CMCA so the community chose David though he did not fully understand the content of the CMCA but went ahead and blindly signed the agreement .After realising that they have made a terrible mistake they consulted legal authorities and upon the advice they petition the national government however as of today their petition is still pending .

Educational opportunities

>no support from OTML in terms of sponsorship for school leavers

>no employment opportunities for grade 12 leavers

>OTML over looked the lower fly communities

They see development as a major problem in the lower fly areas in economic not so much of such activities taking place. There is possibility in fishery but need to know how skills.

They don't have a good relationship with the company



**OTML's cyanide tank in Domori:
donated for use as toilet,
being used as water cachement**

Sui Village

From Lawrence (1995:28-30):

They are United Church. Three or four motorised canoes, no dinghies, plus sailing canoes. There are three teachers, two double classrooms. Community School. No aid post, people travel to Daru. Sui was settled by a mixture of people from the Fly Estuary and from the Aramo area on the Oriomo River who came out to the coast to live. Sui was settled by a mixture of people from the Fly Estuary and from the Aramo area on the Oriomo River who came out to the coast to live. The villagers put their current population at 346, but the same doubts must apply to this ...The village is built along the beach which at low tide is broad and dry. However, at high tide the sea comes close to the village. ..There are about 40 dwellings, and a Women's Fellowship and a Youth Fellowship... Mibu Island, once a plantation, is now occupied by Bamu squatters and people are nervous of visiting the beach people have noticed a smelly, green extending as far south as Parama and Kadawa. ...People catch catfish, salmon and barramundi but the people say the fish do not taste good any more and the number of fish in the creeks is lower than before. As there are lots of wild pigs in the bush they would like to fence off the village with pig wire.People want the Provincial Government classroom finished and they need more tanks for the dry season. They want to make a road to the solar pump... The school teachers would like a radio kit so that they can call for emergencies and they would like to have their own transport and they also requested new housing to replace the old bush material dwellings.



From Techa's notes 4/05:

People up in the mine live in luxury but we are living here, the affected population, and the waste that is dumped is dissolved here.- Now we are in the dark because we haven't seen the effects of the mine and how it is operating, there should be a show where we learn the future of the mine, and how it will effect us, they don't tell us how they are running it and how their operations affect us. - We need to know about the environmental reports, if possible can we provide them the information about the environment? Sand banks: -Previous years life was stable, but since the sand banks formed the currents are causing problems on our lands, digging our soil, carrying it out and our land has decreased in size, land erosion,The sediments washed on shore make it difficult to walk-Water currents change-Company is not looking, damaging the environment and dumping sediments in our oceans but they are not considering the changes in our environments, when we have high tides, after 4 to 5 years times maybe the village won't be here, but compensation will end in 2012 but how are we going to live, and what will it be will it be changed or not, the company must look at us and compo payments must increase-the company doesn't tell us how they are making the payments- sore si no the skin, when we get wet in the water , stuff is green and smell on the beach, even yet we did not benefit from the company-sago, they are changing-had to move

village, the company does not come and tell us about the future of our environment, it is not revealed, so we have not decided on what is the next option for us-sago palms, top part is yellow, and doesn't grow well-diseases, yaws, breast cancer- the leaves of the coconuts and sago are going yellow Sisa Bairam:Ok Tedi has cheated us, giving us lousy tanks which are now all broken.



Sui water tanks

19/ 6/ 05/ Sui village is on the southern bank of Fly River and comprised of four clans of Ubidaremo people. They're in Sui-Dabari local level government and their councillor is Norman Duruba. Daru is their closest town. Their village was founded in 1970 which three other clans came together and stayed in Sui. Their village has shifted three times due to changes in the environment. Their village has been subjected to seasonal flooding during July and August however they have decided to or have plans to relocate on higher ground and their approximate population size is 800+ people.

There you hardly see canoes with outboard motors; there 2 operational trade stores operating; nil houses with iron roofs; 16 water tanks donated by Aus-aid plus 3 water tanks in the aid-post. So far there s 8 grade 10 graduated in the village.

There is a radio donated by Aus-aid, however it's not operating now.



OTML sponsored baby immunization program in Sui

Sago with coconut is the main food eaten in the village. Sago, coconut, fish and deer meat are the main staples, with few other food crops. There are seasonal problems with food availability especially January and February when the rain destroys food crops.

Three people from the village work for wages as elementary school teachers and four from this village have a wage-based job elsewhere.

They do not have rubber tree so on January and December sell coconuts and sago, August and September sell crocodile skin and February and October sell barramundi that's how they earn some money to sustain their living.

They belong to three different churches they are SDA, COC and United church though there are no conflict or tension concerning their religion .However there's no help or aid from the churches either.

Children catch flu and vomit after they washed in the sea. Malaria is a common disease there. Tuberculosis [TB] , womb cancer and dysentery diarrhoea the major killer disease killing three and four months old babies in the village.

Twenty young people age between 1years and 12 years have died; and a 74 years old women died of yaws.



Sui kids with chronic swollen glands

The problems they face are:

- erosion sea washing big land mas
- floods destroyed food gardens
- sediments building up in the sea
- under ground streams destroyed by floods
- fishery resources depleting hard to catch barramundi
- eatable bananas destroyed by a disease

Their village has signed the CMCA and were informed that they will get projects .Mr. ----- signed the CMCA and he was chosen by the community. Yes he read the CMCA.

Health care issues ;

- delay in transportation medicine
- medicine overdue

Economic issues;

- no transport to bring their produce to the market
- no support from government or the company



Sui sores

6/05 Interview Isis Wagon:

Represented the community for signing the CMCA's, it did say that the CMCA's are entitled for review. Till today none of the projects came out of the CMCA's all the projects are picked up and put in the rubbish bin and I am well fed of it. We covered investments in the CMCA's, we made investments for future generations, for future projects, for the foolish idea was that 9.6 was negotiable, we said 20 million-company must look at 9.6 million kina but out here is nothing good here-there are many potholes, the CMCA is one of those foolish packages we sign, we had many patrols to the CMCA people, out of this, nothing, we are wasting our future,. I signed this agreement on behalf of the community, I am one of them signed, people have died without getting benefits The main problem is that we want to the money to increase, it is not enough, now we have the environmental impact to negotiate on, I will make sure that I will talk hard on this.- when the agreement is signed, there are names given, the new born babies were not added-company promise us a house, but they, all the community was promised that Company told us that the compensation is not open to review, Rose – school teacher: Yaws was found, in some that can affect person it comes through skin and can affect the bones and kill a person. Children are suffering by skin diseases Thing we are getting sick from the fish and food, we eat the fish the intestine and stomach, the damage is inside the water and the ground and we are getting sick. We have had breast cancer and malaria, ok Tedi is going to get the form for the medicine. Water- we are using water tanks and coconuts we are given restrictions, we don't use well water or swamp water. CMCA's: They gave us shade tress, in 5 years the mine will close down, I haven't received the plants, the vanilla plants, and how will I plant it, harvest it, or sell it, They didn't come and tell us how to care for it; maybe the shade trees die already, I want something that is productive, not unproductive, not just bring it, leave it again and go away. This building , you see this building, the company is cheating us, in this building, it is not benefiting us, the water tanks they gave us are rotten, the whole fly delta is polluted now, our we need tanks here, built properly, not half done buildings, the garbage they brought here , it is not developing the communities .-when the mine closes what will happen? , will our payments continue, how will we survive-now we eat fish, but will we still eat fish or see the environment, how will it affect us, badly or not? -My concern here is I don't know what will happen tomorrow, what is the future for the next generations, company will come and tell us exactly, how will be benefits, survive We don't know how many the poison has come-animals are affected, after drinking water they die -We are not human beings, we are living like pigs, we eat the dirt, we live in the dirt. Our life is important

Sepe Village

Sepe is one of the 11 Kiwai Island Villages. The rest are: Kubira, Iasa, Samari, Saguwane, Oromosapuo, Ipiasia, Agobaro, Wapaura, Sagapari, and U'uwo. Their total population is estimated to be 2220 (OTDF 2005:1).

04/5 from Techa's notes:

-Talked 'big', about the wealth going out of the country, Australia is rich on PNG resources
-People did not understand the agreements they signed, they were not made aware of what they signed and was written in a language that people cannot understand. -sacred place was washed away - what was in the CMCA agreement was in favour of the company-they want to collect leaders from each zones to make them aware of the bad things with the CMCA's, people still do not know-completely refused CMCA signing, damage is way beyond what was offered, we don't accept the 8th of 9th supplemental agreements-they believe they have been poisoned-our island, fishing ground, cemetery etc has been washed away -not agreed with mine continuation, Aniwa Sesuwa: -when the CMCA's started, our former member

Gabia, also our plaintiff knew that the court was going on , what the mining company did was collect the leaders for each village, 3 from each village and they ran a course, after that course on negotiation skills we were sent out to zones to met and we met for a week to discuss the issue with the company , to continue or close it, now what we were told was in the favour of the company without explaining the effects, and then they said you decide the amount of money and we decided the amount of money and then they said no, it will be 9.6 million kina. All of what they said in the agreement was written in a way that people did not understand, they did not give us time to take it to the village and explain it, they could not interpret the legal and technical terms. Not many of them understood, they did not understand the effects of the pollution, what would happen for the continuation, they were just told the government is not helping you and this is where you will get your benefits. The people were more or less forced to sign, and we met here, this is where we first gathered and we decided that we did not agree on any of the terms of these agreements, because the amount that they promised is no where near the amount of destruction and we thought it was a death warrant. So Sepe and Auti refused to sign, we withdrew from the agreement, and we supported the court, right up to this time, so we were put out from all of these projects, we were excluded.

Now when the court case was settled, we were told we could come into the CMCA's and these letters have been sent to us, our member will explain this more later, now our livelihood has been destroyed, the only thing put in the village was a water tank, em tasol, nothing else, so we completely refused and said no. It is peanuts, we do not agree. It is no where near the destruction that has been caused. So we completely oppose Ok Tedi. We will take it up with the court and to this date, that is our stance.

Interview with Gabe Bedame, elected ward member: Ward councillor for Sepe and Auti:

We have opposed these agreements because Sepe and Auti, we were the strong holders to support the court case, we want the bench to make the decision. Ok Tedi bugged up our life and village and our crops; our ground, our life. He bugged up my life, we don't like these agreements, recently Ok Tedi wrote to me to persuade me to enter the agreements so that I would be a beneficiary of the CMCA agreements. Dingy and engine, sewing kit, this is what they agreed for, the amount negotiated what community leaders mentioned, they came down to 9.5 million kina. I had a community meeting with community leaders and because I was an elected leader, they mandated me to fight for their rights. I am not able to make a decision on my own, they made the decision themselves, not to enter the CMCA's. Up to now, that is it. I am still, though the court case in Melbourne has been terminated, I am still hoping that if I have been supporting the case from day 1, regarding my life, my land, my resources, my sago and bananas. These things I feed from have been polluted, I also have been polluted too, these plants that I eat, all and feeds the water and the land, and because of the pollution of the river system I believe I too have these effects, I eat these things, there are poisons, metals. I have them too. All these people have mercury or other poisons, this is why I oppose these agreements, I want to put this to you, it is very sad for me at Sepe village, the waterways have been diverted to me, all the shipments that go through the river system eroded by village and my graveyard of my ancestors has been washed out, the island near my village has been washed out completely. There are some of the reasons why I can not agree to sign these agreements. We have supported the court from day one and we were hoping that some kind of payment apart from the general payment (1996). Upon dismissing the Victorian Supreme Court, the government and the company must give us something better.- Steven Bama(red hat, blue shirt, old man) The company wants to continue, if they continue mining, the more damage they it will do, that is going to bring more damage to us, 186K this lousy money , for this lousy money, they should stop it. Before continuing, they will have to continue it or we will not allow our environment and livelihood to be affected, what they are trying to do they

will bring more damage. Their poison comes to us, they are giving promises and lies, but they do not fulfil them. They must stop this business, I think this other deposit must be stopped. - Auke Makisa: older man, black and gold shirt and cap

Ward Councillor: Our graveyard was washed away, we don't have our history, it is washed away. Also Pogera is doing the same thing we have double impact. BHPB was originally an Australian company, they bugger up my life and now we should resettle me to somewhere, I can stop. My village is washed away rapidly, even Auti and Sepe, the five years I am in the office, if I bring development to my village, projects to my village, will they be washed away in 5 years, so the PNG and the government must resettle us.

Woman: we women are affected most, sometimes the workers do not provide us with health centres, some of the children are born deformed. Some people are treated as mid wives but they do not have the proper equipment .

KekeSa Elia: Chairman of village of Sepe: High waters bugger up our kumara, pumpkin, garden crops. Time when I was a boy, we used to wash in the river, we had plenty of food, now the company and government came with a health patrol and said we had YAWS, a disease which we did not have before, we know they are covering up, that they have poisoned us.

Woman: we don't have a school, we want our children to go to school, the place is destroyed, now we stay in Daru, to send our children to school, if they are without their partners they are unhappy, they cry to be away

-This area, we live in this area, we don't want to be here, we want to be in the village, now we move around like birds sitting in the trees because we have no place to make our nest. Because the company and the government make bad decisions, now my water, my land, my freedom of movement is affected and destroyed.

-What good has it put for me, to eat and live off? Now from the time the company has started until now they have made nothing good for us, they gave us this lousy money, 180K, with the tear drops, some of us are dying, children in the womb are affected but the company still denies us. Now they need to give us land that we can live off, if they can settle people from Iraq then they can settle. The PNG government can resettle us, do you know how much garbage goes into this river. 80000 every day, still the company is working and the waste is going down. Our right of movement on the water and sand banks are coming up, our life is very important, we have come to stay here, because how can we feed the children, we leave the village because of this, it is very sad, the government and then company resettle us in a right place. We move around here, we are put them to school but how can we feed and school our children, company promise to put all these things in the village but nothing. How many years have gone by and nothing, the company is still cheating us, that is why, we Sepe and Auti stand firm, stand strong. 100 villages signed for this and we, of the villages, still stand strong, we reject everything in these agreements.

Now we are moved around with tear drops. Our court case did not get the good result, we are still waiting while our children, mothers and fathers are dying, (Auke Makisa: older man, black and gold shirt and cap)-they put tanks but how will we maintain them, some already have rusted, and where will we get water when they rust, there will be big water problems- Green colour on sand, and they wash the boats down in the river; wash the dust into the river. Boats erode our island, they are using our waterway but they do not pay me. -Population in

the two villages in the census was 350, maybe 500 people live here, how many more people have moved to the mainland to the place where they married into. -Australians are benefiting from our wealth, we see it fly out and we see it go by in ships and we get nothing, they take our resources, Australians are living at our expense, we will not bow down to the company, when they give us a sewing machine or a 15hp motor will we benefit from this, will our children benefit from this, no! Our livelihood has been damaged. Most of us are here, afraid to live there, we are thinking a lot about our children, are we going to live injected with the poison from the river, that is why you see us all here (Serege Elia) We could set up a school there on our island but it will all be washed away by the sand banks. Joseph Aniwar: We don't have health, education, communication, and we staying Daru, here we have some development, you have come to take the resources, you will come here and you will go and I will live and die here, it will take generations to recover it, maybe by then our people will be dead, without food and livelihood, will the government, feed us, no!

We are afraid to go back to the village we want to go back to the village but we are afraid, what are we doing here? Nothing, but we are afraid we will be poisoned, now that the government are planning to evacuate people to the village with the free trade zone, but where will we go, there is not village anymore, they want to make it a FTZ when you see the living conditions, our livelihood in the villages is destroyed, people here are baking, doing markets for their living, peopler are struggling for their life, the company and government and waiting for something to happen, they can talk about bringing projects to the village but our villages are going, they are blind to us-need to provide health services to the village, they are badly affected-Where will we go when they tell us to leave here with the FTZ?



Buria Village, Wabada Island

Wabada Island total population (5 villages) is 1875 (OTDF 2005:1). These include Gesowa, Wapi, Buria, Aibinio and Isumo Villages.

4/05 from Techa's notes:

The village used to be on low ground, but salt water came up, under the village because of the sand banks, because of the flood of water in their village they had to move inland to high ground. They feel safer that they have moved inland and it is easier than when they were down near the sea. When they dig beyond a meter, the salt water rises up. They don't have any toilets for this reason. They rely on rainwater to drink, not well water. The village was split into two, one still on Wabada, near the sago swamp, we moved 5 years ago, and Ok Tedi did not help them. Fish and crabs, seafood bugger up. Wild pigs are no longer good to eat.

Waiting for 60 hp motors, they haven't arrived yet, They seem well off compared to other villages, they are high up, have lots of sago and other food. Their concern is the compo and

CMCA agreement. The village was one with Usumo but they broke away. Washing the copper ships in the salt water buggers up the environment

Old Man: I was a young man, I didn't see these sandbanks, the water was deep, now I am an old man, before the water didn't come up, it stopped in Daa(??)da town now this is finished, we lost our place, the sandbank is finished there, my place got covered up with water, we lost our place and now we had to move here to a new place. Environment: Nabia GadesOur customary fishing camps, we now don't have any proper place for fishing, or for making gardens, before in our older times we had higher places where we do these things in our traditional ways, now we find it hard to fish or make gardens in our island, our crabs are dying out before our eyes, our sago palms and garden crops are affected and we have to look for new places. Before in our older times we used traditional weapons for hunting and fishing. Now we have today's weapons for fishing, but we don't use our customary ways of hunting and fishing. In the mouth of the Fly River this is our hardships. A place has become shall and the water is affecting us. The water is caused by the sandbanks. The water covers and washes away our customary areas. Our sea is changing colour.

Young man: Sebastian Sake (Aroke?): (**good person) We did not live like this (?) when Ok Tedi started, when it started he negotiated with village people, he said that he would benefit our community, but he is benefiting us with these lousy things that are not development, he promised but he is not putting up these things, he is not developing us, only with water tanks, but before we did not have sand banks, and the water is rising up in the villages, now we have (??) these problems (??)Some of us our fisherman, we get these fish with big heads and small tails and no blood. Before we didn't have this problem. They negotiated with our people, our village people, now we have gone to school, our great granny here signed without knowing. Thinking of the future, they are paying us with this lousy money, they have put us in this problem, before our sago used to make 11 bundles, now it makes only 2 or 3, our yams are not growing , they are dying out, our watermelons do not grow, We see the ok Tedi vessel going down and they wash their ship while travelling through our river

Woman:Before we go out catching crabs, now the crabs have no meat inside, we make money out of crabs, but now the good crabs have no meat, We make money from sago, crabs, banana other garden crops, but now we don't make money, some of us have children in schools and now we cannot pay the school fees because we do not have enough to sell

Development

Since ok Tedi started, nothing is happening, development has not come, nothing has improved, no proper agricultural business, no benefits have come, we are only suffering, every officer coming from Ok Tedi has bullshitted us, saying these things projects are coming to your area, but we wait , and we wait for months and years, you can no see nothing here.Only what they bring is equipment and fellowship, we are unhappy, the main problems are food shortages and water shortages

Warere Arusa: We are now worried about our lives, the company is holding our lives today; maybe god already withdrew his power from us. We don't know how the company is managing and what sort of poison he is using, we here are not animals, we are human beings, but now the company is holding our lives. Maybe if he does the wrong thing, next time you come back , you will not see us, we will be gone, we do not know what they are doing, Some of our young children, our old people are dying,. God made us equal, but this company is killing us, and we are just trying to surviveWhen a bird makes a nest in a tree, the waste comes to thee ground, spreading on this arse place, and they piss piss long place belong

meThey didn't ... tell us (?) of what they signed, mouse man belong place, signed them, they didn't look or understand

Else Parima- Woman's rep:

Woman's fellowship got three sewing machines, 6 materials, some needles and threads



Wabada fishing

Gesowa Village, Wabada Island

Gesowa population is 358, with 58 households and an average family size of 6. They have one tuffa tank from Greenpeace Australia, one from OTML (yet to be installed).

The OTML copper ships have supplied water twice. There are also 2 wells with low water levels, and they use sea water for general purposes. They are non-sago producers, but they buy it from mianland villages. There is no school, no aid post. And the diseases are diarrhoea and skin infections (scabies). (OTDF 2005:4-5)

From Techa's 4/05 notes:

CMCA: George

OTML teach people how to negotiate, we went 5 times to Samari during negotiations we were told it would go for 10 years only. For that reason, my counterparts agreed to sign; it would not go for more than 10 years. Without OTML coming to the local villages they add 2 more years, they distributed letters that 2 more years were added, they most come to the people to the leaders and ask for the people will say yes or no. Pollution will affect grounds, fish; etc if we are not on high ground, when the rain comes it brings the sediments down. Where we stand was once bush, there coconuts were planted in the village, and to be out there where the water is-the fish heads were big, tails were small, wild big and cassowary, how will be survive if they don't eat this, Special support grants, for 5 or 6 years but they were getting these agreements, now not. -Village development funds: we don't know where the money is, if they are giving it to the government or not, but they are not giving ti to the villages- Compensation: if I bring a basket of crabs to the market in Daru I can earn what the company gives me in one year-before signing the CMCA's officers told us that we would receive cash payments, we told people this, but 1994-6 325 K (back payments) 97: 144K, 98 115K, 99 118K, 2000? , 2005 196K- They didn't tell the people how much cash they would get but only that they would get cash. Crabs, some crabs are not good, seafood is affected. Now when you put in your fishing nets, you come back with less.

CMCA's: we haven't received any good benefits, we don't think they are fair, the compo money needs to be increased, also needs to include the new born babies ,CMCA ;s never read to the communities, we haven't got a copy, haven't got the communities consent before signing. They brought this radio, we were not happy, it is lousy, we do not even get fly radio

here. I thought I would throw it into the river, they are giving us these things to shut our mouths, they think we are babies. When I go up to Kiunga I will take the radio and smash it on the floor. Samai: they didn't read the agreement with us, they put the agreement on the table and we just signed it. OTML came here when we had a drought, the confirmation about our problems, when they went back nothing happened. Water: in the droughts people get water from the logging ships. -once company came and gave them water from the mother ship-normally we get water from the logging ships-our well water goes down and gets dry, or else it becomes salty, is salt and fresh water mixed. -wet seasons, we have coconuts but dry seasons we have only the coconut trees-without water we cannot survive-Aug-Oct is the dry season: the company must help us with provisions during this time, with water etc. -dry season before, we got water from the wells, but now it goes right down and is mixed with salt, or it dries out, our children get sick, adults too -cassava and other foods dry out-sediments from the mine are causing sand banks, they are causing the water to rise, and bugged up everything-when the ok Tedi people came, they were not serious, they were laughing at us, they do not think of people's lives, do not take it seriously.

Usumo Village, Amada Island

4/05 from Techa's notes:

When we arrived there were mostly women in the village. There were only a couple of men as they were all out working.

Mario Arnone: In 1996, we had programs. After 5 years of the CMCA's after 10 years inside these agreements we have bush houses, we still have nothing. The company's promises have come to nothing, we don't want to sign again because no real benefits have come. Drinking water is polluted. Sediments are building up causing the water level to rise and flood inland, washes into villages in the high tides, the sand banks are coming, garden crops are destroyed, up our sago is rotten and doesn't keep; tapioca and other foods do not grow, erosion is occurring, CMCA's after five years all we have is wasted promises, they promised us things, this next year we will have a CENSUS for the CMCA and I will be presenting they have not done good things, copper ships drain their waste out here, the salt water is rising, creeks are shallow and the water cannot run fast. Ok Tedi people come and collect information but never bring the information back to the people, Children have sores when walking on sediments

Ok Tedi has given us a 40hp motor, a 28ft dingy, gave the youth instruments, rugby balls, basket balls, We didn't ask for these things, for the guitar, etc, Women asked for a 15hp motor so we could take our things to the market but they didn't give it to them, Crabs get rotten very quickly, die quickly, they would before stop for a week or two and you could eat them, take them to Daru, some people even died after eating crabs. Fish have big heads and small tails, things don't keep anymore, our garden foods, coconuts. We find green stuff in the mud, still we wash in the salt water, we wash our plates in the salt water, we have no other choice. We only eat coconuts, the sago is finished, is no good now. They gave us sewing machines, ducks, chickens, musical instruments. We are vulnerable to disease, like cancer and yaws. Complications of urinary tract, and pek pek (excretion), and complication in birth delivery. Young people have left their homes and settled in Daru town. In 1994 experienced water shortage and had to get water from logging vessels

Daera Una -Chairman, Gesowa, Buria and Isumo villages

Daera seemed to think the CMCA's were not so bad, he was saying that Ok tedi was bringing 15 boats with 15hp to his village, they would be there to renegotiate the agreements. Didn't seem to be thinking too much of the people in the village and their needs.

Tirere Village, North Bank

4/05 from Techa's notes:

Contact: Akeio Koboradoro

Compensation: 250K

Environment: fish are dying, trees are dying, our environment is not very good.

Sago swamps have problems, sago is filled with water,

trees are dying and food gardens are dying

Water is polluted and smells bad,

Want the company to supply food.

-company is not giving us the right information, they are not telling us the right news about what will happen

- no awareness made about a mine extension

- we used to get 3 or 4 bundles out of our sago, now only 1 or 2

- Children born deformed and still born, complications when giving birth, abnormal births

-fish, things are contaminated

- Compensation: does not feed the people, school fees are a big pressure, we get 150-160

Kina, it is not enough when compared to the damage,

-low tide we see green stuff on the sand

-ok tedi takes some samples but they do not return with the sample to tell us

-company says don't eat the fish or crabs, not the intestines of heads, but what should we eat then?, can't eat the head of the fish

-copper goes in all the food, at night the food glows

-Medical patrols by the government and company found YAWS, they don't know what is causing, and it is like boils, this is a new disease

CMCAs: negotiation they say what you put in and it will be done for you

Helping with radios etc but this is not really helping the people's needs

They said you will get what you want we put in for houses for everybody; permanent housing but they have given us these little things

Vanilla and rice: our environment is not suited for these things, they waste our money on these things, and the salt water comes up and destroys them

-company has told us to look for new settlements, but we have no where to go, there are mangrove swamps behind us, in the future they say the environment will be spoiled, we don't have any high ground, we have nowhere to go. Now salt water comes up with the village and the crops are ruined

Wants CMCA to change its policy, people do not trust the CMCA and the Ok Tedi mine

Has impacts from both the mining and the logging companies.

Sapore 1 Village

From Techa's notes 17.04.05:

Asked for support regarding the CMCA review

Original village was Sagore, further up but due to erosion and water rises now moved to Kabaturi (Sagore 1, there is also Sagore 2 further down). Food crops damaged, water comes

up and kills all our gardens, garden foods, banana, ibica, guava, coconut, bananas producing less and coconuts are smaller in size. Drinking water was destroyed, living conditions declining from bad to worse Sediments are building up in the sea bed and water levels rise Before the watermelons were big but now they are small . We ate big bananas, now no. Haven't got school house

Chairman Matuba is concerned about the CMCA, without knowing he just signed the agreement, now what he is thinking is that he doesn't want to sign again, he was forced to sign ,we haven't received any benefit out of this agreement. Villages talked a lot about the compo money Complained about the mother ships who wash their waste into the water Now they badly need water, they don't have it, Fly River has been affected,

Ima Kapea: My place, Terere, Mipani, all the same, our bananas and food is destroyed (em bugger up), suk suk. Kai kai all destroyed, place belong me is no good, before I was hungry and I found kai kai, now I can not find it Company is not helping us; he gives us compo, maybe 130-160 kina All the time they are lying, they give us this little money

Gabe Iwa: Our living is not better. The company would come and trick us, our grand grandfather, their fathers before them were ok, things were good, the company is using our environment, and it is no good. They make sand banks. When I was schooling it was deep water the salt water, the mother ships just sweep their dust into the water Floods come up and cover the place we are thinking that meat of the fish gets hard, we think it is caused by copper, company does not change anything, they have not changed our life. We live in customary houses. Children are getting sick and we don't have any doctor, Daru is too far for us Some projects we put to the company, the company will not give us.

Chairman (two villages, Sapore 1 and 2): From when we signed the CMCA's they really tricked us, I am a rep who signed the CMCA agreements and I am not happy about this, and now in 2005 well next year we review, we are going to think ourselves for this second review, we will decide, I will not say what (?) this time When we signed CMCA's they didn't , they only said you have to put infrastructure and sustainable projects to us and we will give them to you, we just signed this, we put these projects, we wait, after may 2003/4 they change their minds, don't put infrastructure or sustainable projects, they tricked us. Cocoa, rubber, and vanilla, we just waste putting these projects; they just want to give us sea transport, chicken and ducks. They push these projects. For this second review they had to decide if we sign or not. Fish have big heads, small tails We are eating shellfish and crabs, we have no high ground in the bush, we stay here when the high water comes. In 2000 water started covering our village, water spoiled our old village Segoro 2 also underwater, we have been here for 6 years, we moved from further up. -green stuff on the beach

Techa: What are the effects of the Sand bank in the River?

Mr: A: At the moment the water has been washing a lot of the island away. These waste are washed to the passage and block the route where the ships used to go through. A good example is the Sepe Village. Sepe has been washed out and there is no more Sepe. And also it is the same with our Village , Amerekamu. Previously we used to stay there near the River, since our fore fathers. But due to flooding and sand bank we left and moved further in to places where we used to make sago. When it floods water will rise and flow right into our village destroys our garden, carries away pigs and chickens and also floods the drinking water.

Mrs B: Here at Wabada we use to have a big well where we used to fetch water for drinking and cooking. But this has been washed out due to high tide from the floods. Today we find it very hard to get water for drinking and cooking. Ok Tedi has given us tanks but it is not enough. It is like 2 to 3 tanks to a village and when compared to the whole population in the village, it is not enough to cater for. So what we do is that when overseas ships come in the men usually go onto the Ship and get water there and fetch water there. Our village is an island and we could not get any clean fresh water. Most often the colour of the sea becomes green which is the waste from the mine on the sands on the Westside of the island. We also see dead fish floating. Crab is one of the proteins that we used to eat. Now when we go and collect them most of them do not have any flesh inside them for us to eat and we throw them away. This is because of the copper poison in the crabs. We do not know when we collect them if they have copper position but we just collect to eat for the day. As a result many of the people here have many sicknesses and diseases such as diarrhea, swollen necks, small sores and so on. Many others have died and we do not know if where the cause is from. If you travel on the speed boat between the Kiwai island and Wabada you will see that waste from the mine and it is green in colour. This waste has caused a lot of sandbanks and high sediments.

Mr. A: In our case it is very dangerous. This is because when ships used to carry copper down from Kiunga, they used to unload them to the mother ship which stocks them and export them overseas. During the time of the unloading the wind blows and takes this dust from the copper into the air and drops down into the sea. The ships travel up and down the river every day and every night.

When the mine first started the mother ship usually come very close here to pick up the copper from the mine. Over the years this place is filled with sandbanks and as a result the ship has moved further out. The sand banks are the result of the copper dust during the unloading. Thus each time they see the sandbanks come up they keep on moving further. This entire place here is covered by sandbanks. When it floods all of this place and islands will be covered with water. In the past when the water was still deep, the water will flow only up to its level and not more. At the moment we are using the tanks for cooking, drinking doing laundry and so on. There is no more well water for us anymore. The floods have flooded it already. In the past we used to have dry season at August, September, October, November and December. During those time the log ships use to come in so we take our containers there to fetch water when all the waters were dried up. Apart from that those barges that come down from the river we also go and take water from there. In terms of sicknesses diarrhea is the major sickness here in the village.

At the moment we have three tanks in our three villages on the island. Ok Tedi gave two tanks and the other one is given to us by the Greenpeace. These three villages are namely; Gesowa, Buria and Wapi. These are three villages on Wabada island.

For the garden crops for instance the cassava they will be ready but when it is harvest the inside will be very strong because of the salt water. In terms of bananas in the past they used to bear up to ten bunches. But today they only bear up to six and not more than that. It is the same with sago. When we the mothers cut it down and wash it we used to wash it with salt water which is not good. In the past it was not like that. In the past it was not like that.

With regards to the CMCA agreement every year at the beginning of the year we used to get Compensation which stands as K150-K130 depending how many members a clan have. If a clan has more members the amount will be much lower. For example in my case I'm a clan

leader and we have got from the mine K18, 000.00. When dividing it up among the each 136 clan members, most of use got K135 because we are too many.

Mrs.B: As for my case in my clan we used to get K6, 000.00 as we are not many. The total number of the members of our clan is about 160 altogether. So when dividing the money among each member each member receives a about and average of K120 per person. This compensation money is given once every year which is at the beginning of every year in January.

Mr A: The first one is the Compensation money. The other thing the mine does to help the community is that it sends out its Officers into the affected villages along the River to get peoples views on what project they want through the VPC. So in each villages the VPC (Village Planning Committees) sit down with them and fill in the forms regarding what project their people want in their villages. After that there Trustees who take up these forms to present to the Ok Tedi officers regarding the Peoples concerns and issues. Their job is to tell the Ok Tedi officers that their Village need things like a Classroom, Aid post, dinghies, generators, Community hall and etc. This program only started only a few years ago but it never really been effective. Many of us do not need things like generators, or motor engines. We need basic services like good health centers and good classrooms and most of all more water tanks. Right now we need more tanks because the demand for water is high as we used the water in the tanks for cooking, washing laundry and so on. Every minute the water is being used and can only stand for three months. The one we have now is only a medium size and when comparing the total number of people in the village to use such a tank is not enough. Previously they used to put the Southern Cross which is good. But due to the salt water is has become rusty and they have changed it with these medium size plastic ones. Now we are still waiting for our project to come. Nothing has happen up till now. The Trustees are still fighting for our project but its very very hard. The Village Planning Committee are saying each village have their money for the projects they want. But the problem is that the money is not being released. Because of this we don't know whats really happening or going on out there..

We think that the Company is tricking us and telling us lies. We want the company to increase our Compensation money. Each person should get K500.00 or K1000.00. The other thing is that when our leaders go up there at Ok Tedi for meetings they do not really fight for our Compensation money. Instead they come up with all kinds of other issues. The leaders are weak and can not speak out for the increase of our Compensation money. Even though we chose them to go up and bring up our concerns, nobody have the guts to stand up and speak for us. Because of this nothing will happen.

Trustees have the power only to speak out for the Projects that their people want. They do not have the power to speak for the Compensation money. The right people are the Segewo who are within the body of the Trustees. They are the ones that will fight for our rights regarding the Compensation money.

Ok Tedi has so many things. If you put Ok Tedi to Court, they will pay you outside and you will forget all other things. How many people have tried but nothing has happened. People we have chose went up there and have tried to bring the Company to court but the Company has bribed them with millions of money to keep their mouth shut. One of them is Gabia and there's the other two. These people when they get the money they don't think about the other people in the village. They only think for themselves and eat up the money that they have got through bribery. The people will be suffering on the other end without knowing what's was

happening. There are people who are supporting Gabia and there are others who are not supporting Gabia. Some of them no longer trust Gabia even though he took the Company to Court in 1996. Even though when he was a Member in the Parliament he never think about the people and did something for them. He should have done something for the people when he was in power. He only started this court case when he lost in the elections. So we don't want to waste time to support him. This was done before the CMCA was signed in 2000.

Mrs.B: The first time we got our Compo money was about K325.00 per person. The second year we got K118.00 per person which is half money. Today we are still getting less which fluxuates from K120 to K130. But most of the people at time did not get their share as they did not give their name list. Those luck ones who gave their names were able to get that much money at that time. For instance in our village my clan gave their names got K325 with the other three clans. Most of the other clans did not gave in their name list so they did not get it on the first round. They only got it the second time. The second round went down to K115. People from the islands have to travel to Daru in their canoes to collect this lousy money even though it will be raining or windy. It takes them all day and night for a family, the mother, father and the children all traveling together to get to Daru to collect their lousy money. When they have come they will make small tents at the water front and wait and wait until the money is ready.

People in Western Province are always looking for money. We have mining and logging that also affecting us but yet we are running after money. So the easy way to get money is just say yes and sign up. When I was doing my research all around the province and listening to what the women were saying made me cried. They expressed what was deep with in them. But one other thing is that when a company or somebody who come and say they wanted to start up a project or something women are not involved or being heard. It is always the men who signed the agreements and so on. We are still fighting for the Company to increase the money of the Compensation.

Aduru Island

17/ 06 /05/

Aduru village is made up of the Makaim people, of 7 clans. Moneke Nalowa is their village councillor closest town is Daru and the main method of transport is canoe . In they 1920 settled in Toro and later shifted because of tribal fighting .Their village shifted once because of erosion It is subject to seasonal flooding quarterly and it rises to two or three meters high. However they do have plans to relocate on to higher ground.Their approximate population size is 500+ people.

They have 9 canoes with engines; 4 operational trade stores; and there are 70+ grade 10 graduates in the village. There are 7 semi -permanent houses with iron roofs There are 9 water tanks and no emergency radios to radio to town

Sago bananas with coconut are the main food eaten in the village .On a qualitative scale sago, bananas with coconut would be main staple however they claimed that they have enough food to eat .They do plant some root crops . There are seasonal problems with food availability when it's floods.

Food production and diets affected through flooding when all the gardens and food crops destroyed . Floods destroying gardens and food crops ,sago stands destroyed ,erosion .Most economic food crops washed away .

3 people from the village work for wages as elementary school teachers in the village .30+ people from this village have a wage-based job elsewhere. The people in the village earn money from selling food crops in the markets and crocodile skins and fish. Also they are benefiting from the mining compensation package money.

There are two church ECPNG and Four Square .Their at times do have conflicts or tension.The church do give help in sponsorship and built an aid-post for them .

Malaria , short sight , arthritis especially with women , skin diseases, knee problems / arthritis and abnormal baby bourn with one eye .

Children age between 5 years and 16 years deliberately dying of unknown diseases ,however they believe that it must be of food contamination that were consumed.

They have signed the CMCA without any awareness on the content of the CMCA and didn't understand the agreement . The community choose their representative to sign the agreement without reading the agreement .

Youths actively involved in exchanging drag[marijuana for guns . They want the mine to continue operations and bring them development before it closes.

Daru Town

Daru is the Provincial capital and so the main Provincial Government offices are located there. It is also the administrative centre for the main religious organisations operating in the Lower Fly. Daru has a fluctuating population residing in two fairly well defined areas: the old colonial part of town built along the highest ridge to the east where the churches, hospital and best residences lie, On the wester side of town are the settlements: Mabudawan corner, Sepe corner, Samare corner.

The main churches are the Catholic and the United Churches which both have their headquarters on Daru. Some fundamentalist churches such as the New Apostolic Church, Destiny Chapel and the Seventh Day Adventists also have small suburban areas.

Much of our time in Daru town was spent interviewing in the settlements and chasing down medical records at the hospital. Nancy appealed to the Acting CO for assistance in isolating unusual symptoms that might be traced to chemical toxicity, but soon came across a predictable resistance. Because Daru has one of the highest HIV/AIDS infection rates in the country (see Hammer 1994, 1996), there is understandable reticence to making records public.

The following are (still very rough) notes from Nancy's visit:



Firewood girls, Daru

Health Office, Daru Contact: Alice Honjepari, Director of Rural Health Services

In 1997 they tried to see if sicknesses were caused by mining, but the diseases that the people have along the mouth of Fly villages are said to not be caused by Ok Tedi. These are the sicknesses that people had long before the mine started to operate, says Alice. Sand banks are forming, that is true, and modern life is changing things, we also encourage people not to drink the water along the Fly as we believe it is affected. Because of lack of funding we haven't gone out for patrol programs. At times when OTML provides transport and funding then we usually go out for patrol programs. All these diseases and changes are coming up but nothing to do with the mining.

Daru Hospital

Dr Amos Lano, Acting CO (Dr Uyke Aina in POM)

1-2 cases here, tissue spacement, frozen burn scars from bathing acid

Gout and arthritis because they're fish eaters. This acting CO has been here only a year.

Skin and mercury and arthritis concern due to transport problems, rare and mostly upper fly

Skin infections here and islands predominant here. He says hygiene is poor. He's from ialibu.

More infectious scabies and septicemia. Cancer of the esophagus in smokers elderly men mostly.

Breast cancer women rare. Some thyroid cancer, toxocosis. TB in glands too.

Thyroid—enlarged glands, protruded eyeballs and sweaty palms.

No chemical oriented itchiness, rare bowel concerns.

Could I buy him a digital camera or laptop for recording things?

Yaws from Fly River side, says the wife of Pastor Daniel Hinua, of cornerstone church in Parama corner, she is named Melne Mogi and works in records 12 years. Outpatients with scabies are told about hygiene

Daru market sellers say they can make K22-25 on weekdays or 70-80 on sport days at the fields. If they make 15-20/day, they can make 50-60 week without working fulltime. They sell donuts, cordial, buai, peanuts and ice blocks. There are loyal buyers for some, and that matters. Buai and cigarettes are the fastest sellers.

Nine communities only in the Fly didn't sign. Middle Fly and south has had no awareness for the CMCAs, although around Bosset people did their own, even though people speak excellent English even before pidgin.

Plan to shift South Fly provincial headquarters to Wipim island up the road from Oriomo. Mabduan and Morehead have aid posts and meds from Ausaid bldinga and water cachement tanks too from Sui to border, just the coastline. OTML has built meeting houses in Fly, open haus win, but no maintenance. K110-115/year compo from OTML. But some mine effected areas get no compo. Ausaid villages aee Sui to Busi -9 villages—with Tuffi tanks, bldings and cachements, haus wins, infrastructure from Ausaid. CDS concentrates on inland only, not duplicating the river efforts.

In 1995 Ecoseeds they recived a water testing kit from AusGreen, to test bacteria not acids but nitrates.

If PNGSDP can place a 4 page hard stock insert in the National newspaper, why can't they disseminate the info on the CMCAs? What is the ausaid treaty area in the Delta and Lower Fly? It is as if the original OTML had been unaware of the topography, geography and basic physics—that water runs downhill and expands. Kiwaba Dev Trust, Suki/Fly Gogo Dev Fdtn, Dudi Development Trust (South Bank), Manawete Dev Fdtn—North bank.

The fold out from the 27th May Post-Courier on the PNGSDP Ltd is all about how they've done little or nothing yet but plan to do so much more, and have moved investments to low-risk shares and paid more on administration than projects, and what they have spent has gone into Central and Oro Province roads mainly.

Samari Kona

From Techa's 4/05 notes:

Contact: Catholic Pastor Nicholas Jack,
Chairman (???) Ginima Maringe

Samari Corner in Daru: Lewis Siware , CMCA signatory, Brian Dipura: signatory, Angela, wife of Dipara, Luke Arawak, ward councillor 4 clans We used to stop down near the coast but now we moved up to high ground, the salt water came up into our old village Omesapar: our old village, goes right inside the bush, old village is in the water now Flat ground, we only have flat ground, no high ground, al gardens and other things are on flat ground, the salt water is coming up, it comes up in January and June/July, when it rains the village floods affecting the food crops with salt water-good was destroyed but people still consume-all the things the company gives them are not really good quality, they are destroyed. -When Ok Tedi sends this form and says fill it in, we do it. They just send us these forms and we fill them in-people stay in Daru, they went to get compensation and they stay there, maybe 200-

300 here and maybe 1000 stap in Daru, -fish crabs less, sago that grew near our place doesn't grow anymore, food is very scarce-they come and take reports, send requests for help, for water but nothing comes-send message that the sun is killing everything-haven't been told if we should or shouldn't eat the fish, the company comes and takes reports but they do not give these reports to the people. They say it is ok to eat the fish, CMCA agreements, people make projects , say one family will plan for an engine and dingy and then they come back and do it in their own way. -before it was long way between villages, we were all out on the edges of the island, if you walked up to the next village there you would have to stop and sleep the night and get up and keep going the next morning, now you can go in the morning and come back that same day. -experiencing severe malaria which was not happening before, with all the water coming up the mosquitos are breeding -we no longer use well water to drink, we use tanks but in the dry season we have to survive on coconuts.

Kubira: now we go and cut sago there.

Gabia Court case: Kubira, Auti, Sepe, Iuwo, Still have people on Gabia's side.Kaderima, Madame, but some of them accept things from the company.

We have heard of changes that come up in the villages, changes in fish sizes etc, and we have seen it but we can't provide you with written documents to confirm this, but they are true stories that you have heard from people. We haven't received information from Ok Tedi mining, they haven't given us information yet so we don't have restrictions on what people should or should not eat. Some of the fish species have gone, dugong you used to be able to find easily but now it is hard to find. Ok Tedi has a fish farm so we are trying to work with Ok Tedi to do this fishing for prawns in a farm so we can breed them out and put them back in the river system. We have a lack of funding so we don't have resources to do very much, to have a research team, for people to go out and do this work. They were appreciative that people come and do this work, and would be willing to help and assist with further information but don't have any research.



Daru waterfront

Brian Moiba, Chair, Samari Community, works with Daru High School
 Albert Nobuo, Samari Principle landowner
 CMCA signed by Ward Members, Kamin Arawok and Luis Siware
 VPCs under Kiawaba Trust—VPC David Korea—VPC Chair, in Samari
 Deputy Omari Enau, in Daru Secretary, Charles Samoa, Samari Treasurer, Brian Moiba
 Women's rep, Angela Siware, Daru
 Youth rep, Lista Bama, SamariILG President, Taylor Rataba, for Samari Community in Samari

Crayfish K70-100 best catch, fish K20-30. Always fish, but less in rainy season—some for family, some for market. Women fish and sell crabs and shells at market. Men sell fish and crabs. Mostly men fishing , dry weather and good, every day. SDA—no fish with gills, no pig.The

barramundi and catfish have big heads now and sores. The SDA are left without protein—yams, nipa palm fruit taboo during pregnancy. No menstruation or male taboos. 6 exogamous clans, with sister exchange. Pigs are skinny now. Clans are Mubagu, Bomumuso, Sibatkop, Obirigo, Segerakomeri, Demagadei. One older woman is Abrame Awake. Some older people, not many. The older man is Guburur Awake. Less than 100 families, ca. 400 people.

Some is customary and some is gov't leased land in Samari. Ward Yaru, Tamati Ward, Karakara Ward, Darowaro Ward—the 4 wards in Daru. There are Samari in all, but the Samari block is in Yaru Ward. Robin Barane, APO Samari. Takes 100–120 litres to get to Samari; and its K92 per 20 litres (K4.6/litre?)—5 drums each way depending on the load, although they go and come frequently. Also flooding on residential rts have access to compo only, not the birthright people. Samuel Gausa went to POM last year to get lawyers and was a court case supporter. ILG count population in town is 3500. Community split over 8th supplemental agreement. CMCA Dec 2001 to now—no infrastructure, no direct money. 40 HP engine, 22 ft dinghy, fuel and nets for village (is all they got?) of 9.5 million—2 million invested for 10 years, 1st one mill for 20 years. 250,000 invested every year. 7.5 million should be for development annually and to 14 Kiawaba villages. 1 million kina injected for 14 villages for after the mine closes, another for general development, third for Samari was 100,000 for the village itself. No one is getting cash in the village. Ples Samari community school catholic mission. Mostly catholic, 1 SDA, apostolic, church. Jim Marama last speaker at Samari corner. The women were Cyria Lukas and Pata Moiba. There will be a barramundi farm (planned) for Samari too, and they've registered the clans for compensation of the pipeline comes down to Kikori. Flying into Daru you see so many beautiful trees like stalks of broccoli on a grocer's flat. Sido and Sagaru—from Bosset all the way down father and son Aniseke or tall man in language in Lui (a place in Obo) they have a long matmat for Aniseke or Sido some part of the story women cannot be told. Legend up and down the Fly, went to Kikori and he was killed in Gulf like Chalmers. Yiodo—stonefish from Parama Island, how the crane (Karaba) came to Parama. 18 village all together. Kawok is outside the CMCA, Moim is inside. Copper pipe broke in 1994 in Ninggerum area and it spilled and killed fish and sago there. The compo was \$50,000. they call it kilometer 50. Oil spills from drums dropped up and down the Fly. Small road, feeder road only, blocked by big vehicles. Rubber price hasn't risen (40t/cup) in a long while. Churches are strong here. No strong women's groups though. Long labour for women and stomach ailments, they say. Deformed babies are rumoured. Body and joint pains. Eating sago and fish makes them tired, young men go bald and grey, skin slack and dry. Dredging just put the pollution on the roads and spread these problems. Bige dredge fills a field, a former swamp, and they use it as a playground now. Copper oxide pm rocks is the sign of copper in the water at Panguna in Bougainville. In Sui it's covered with this green oxide after the water recedes. Cyanide—Mipa [Mipan?] and Ivere—between these spots in the early 90-s a whole container of cyanide was sunk. The waisan color near Obo and Sui has turned black now. Obo and upstream is dieback, below Strickland comes into the river there's no dieback, just big erosion, and porgera tailings into the Strickland. Mt Fubilan deposit is finished now and they want to go to a new deposit. A passage will be blocked—toro—at the mouth of the Fly. Already copper ships are stuck. You remove a whole mountain and pour it into a river, this is what happens.



Daru market

The dredge is another mine, for detecting nuggets, and it also throws away waste, doesn't clean its sediment. It moved from Awin side to the Yonggum side and has not negotiated with the landowners. Plenty have boycotted the company, even some of the CMCA signers are angry now. Only in Bige were houses made from the CMCA foundation, but they were made of softwood and board, untreated, and are already rotting and unfinished. Ten houses only. In other communities they made haus wins. The ship at the dredge site is collecting fols is off limits to locals. For the lower islands the problem is erosion and sediment blocking their waterways, and copper ships spilling dust or having the wind take it up, or having it knocked out thwn they bump sandbanks. Their wakes cause even more erosion, too. The settlement people have no more ground and live off money no, so they're most likely to sign the CMCAs.



Daru market, Sila and Techa

20 years of logging in Bamu
 IHDGO catholic church NGO
 IWDA for Ausaid (Helen Rosenbloom)

Mipani Kona

The ones who live in the village sign the CMCA and benefit from the projects, the ones who live in Daru are not beneficiaries to the projects. Those in the village said you have to live in the village if you are to benefit. -salt water is coming up, it has destroyed their gardens which is the main resource they rely upon . -they are fishermen, they catch fish and sell some to meet their needs and they eat also. -No explanation or reading of the CMCAs before signing, they forced us to sign without us knowing what we were signing. -Company sponsorship should be speedy to allow people their children to further their education, they have been promised it. -aid post in the village is without medicine. -no proper health care, schools without teachers, no proper classrooms. Water tanks are bugged up- no longer enjoy environment in the village Disease and sickness same as Sepe people, mothers facing difficulties in birth, skin diseases, swollen and itchy sores, skin is itchy when bathe in the salt water. New born babies are washed in the polluted water. Believe that they have been poisoned from the foods that are brought from home, confused

as to whether to go back home will they benefit anything from the CMCA's. They said if they go back home to the village who will compensate them, what if we go back to the village with our children, we will be affected by the impacts of the mine, rightfully we are from there and it is a must that we are getting paid but who will compensate us, we have been split in two because of the compensation-compensation received was not enough, not happy compared with the damages done. - they have no land at home so can the company give them economical projects, and not agricultural projects., -Fell left out of the CMCA s and cannot decide the power is with the village people back home.

Mrs Gouwo Awake, Women's fellowship Rep: Ok Tedi has to stop the mine because every day we are killing ourselves. -wanted us to help them find out the EDORU (?) trust, what was it established for. Company is paying scraps to the people. They are concerned that the middle men are benefiting but nothing reaches the people. They don't want middle men. Compensation received is not enough compared to the situation, it is maybe 150-160K. Concerned about copper ships washing copper into the water They stay in town, are working in Daru as casual workers. - Water levels rise and flood into the villages-not happy with compo payments once a year, can they pay us quartely

Parama Kona⁹

Oil and gas in Parama, found on the island; June-July rough weather wind warnings for not going to sea.. Suki:Sapoca, Naccoka, Aniyawa, Tigua, Kawturu. Mouth/Kiwai:Terrerer, Sumari, Wabada, Sui. Parama:Doriomo, Marawadai, Sobogu, Miaridai, Gaidai
Kiwai is K92 per 20 litres each way to Daru. Total population is 5000. 600+ only in the village, another large number in POM. 2000+ in POM About 1500 here in Daru. In the 50-60s-70s their parents came to work here. In 98-99 it flooded all the way to here (?)4 trustees to decide on CMCA project proposals. Councilor for Parama is on Daru. Daru Parama people have lots and lots of churches: united, cornerstone, full gospel, CFC, CLC, 4 square, mormom, jehovah's witness, assembly of god, Baptists, Lutherans, apostolic, SDA, COC, Rema and more. Parama is registered land with land titles commission. Bampton Island is what it was originally called,

⁹ Compare notes from the Parama Island village, from Lawrence 1995 (25-27):

There are five clans on Parama: Doriomo, Marowadai, Sobogu, Miaridai and Gaidai. The village is laid out in clan areas with Doriomo closest to the school grounds (north) and Gaidai to the south of the village. ...Parama village is surrounded by water and is very swampy after rain or at high tide; it has built a haus win, converted for use as a canteen.... The village is frequently flooded by the tide and then gardens are destroyed. The intrusion of sea water into the village is a constant problem. As at Kadawa, people have noticed the green slime on the beach, especially at low tide and they are concerned because they have no information on this.

And from King (1995:24-26):

There were many boats, including a large cabin cruiser beached in front of the village. Compared to the other villages visited it was noticeable how much furniture and household equipment and belongings existed in all houses. In a comparative sense Parama gives the impression of being wealthy, although in an absolute sense of course the people are relatively poor and their lifestyle is simple and basic.... Despite, or perhaps because of this higher general level of development, Parama villagers were the most vociferous in their criticisms of OTML generally, the Trust and Community Relations sections specifically, and the provincial and national governments after that. Undoubtedly all of these groups are already perfectly well aware of the feelings of the Parama people as they appeared to be a sophisticated, articulate and well educated group, not the least being their councillor, who had formerly worked for OTML for 11 years. As a member of the Fly River Delta Association, Parama was involved in the litigation against BHP.

Captain Bampton Gazero is the name of the south side, Parama is north side. Now they live in Parama and garden in Gazero. Until it eroded. 2 islands divided by a river or channel. Bampton gave Yamo island its name: Parama. Warione was Gazero's original name, meaning pekpek blong eagle. Bampton gave the names Parama and Gazera.

Ben Amani (who was brought to the meeting and evidently very ill) worked on MV Kirabi where they poured copper dust, and in '96 felt symptoms of copper-mercury poisoning. Fainted—he was sotwin. He is still sick. But has never been properly diagnosed at the hospital, nor has his sickness been acknowledged by OTML; he has not been paid worker's compensation either.

Sumari, Wabada, Sui—south coast

Kuwai has Iasa, Samari, Saguare, Oromosapuo, Ipisia, Agobaro, Wapaura, Sagapari, ---and only Sepe and U'uwo did not sign. Wabada has Gesowa, Wapi, Buria, Aibinio, Isumo Purutu Island has Wabi, Abinio

Petamorubi/Osodae Tribe

Kubira	111 men	124 women	235 total
Samari	189	218	407

Siburubi Tribe

Wabada:

Buria	168	127	295
Gesowa	157	105	262
Isumo	215	177	392

Purutu Isl, Wiorubi Tribe

Wapi	150	160	310
Abinio	110	92	202



At Sepe corner we found the mother of triplets, Hidago Madua, and their names are: oido (male), Daipa (female), Deborah

Sepe Kona

1.6.05 Same ward as Kuburu Kona, same councilor

Auga Kapia, retired from 25 years with health department

Aniwa Sasua, community leader Night soil picked up by town authority and dumped in sea. When they didn't have this pickup they would bury it in a big village pit. Sepe village was washed out and they moved to the south side of the bank, at Auti, on mainland, and copper would fall from boats hitting the mudbanks coming down the fly. Old women here make sago and coconuts and prawns. Eabi Baidama, Member and councilor ward 17, Aute and Sepe village



Sepe Kona

14 clans:

Sepe

Gagaripasa

Agidai

Uboi

Gesere Mabu

Biou Mabu

Sokomabu

Miaridai

Bioumabu

Oiiduo



Bogobere is an island off Sepe that's now gone.

Aute, Sepe, Uwo and Madame did not sign the CMCA.

9.5 million, its only the interest. Schooling standards were higher before, are declined now, no interest in school. The school kids are more worried about food, from bourgeois to peasants in one generation. Gambling and bingo. Interest in money not education. The academic standard is very low compared to elsewhere. Everyone else is benefiting from their suffering.

Madua Auga, with co-signer, didn't sign either Crocodiles have become wilder, hungrier and attacking people—river crocs. Aniwa Sasua Sepe: Aute is washed out, water is short too and people are migrating from the village to mainland and higher ground, and to the land of girls boys are marrying. People are quarreling about food now in place, their ground is shribking and theyre anxious and frightened, women gambling and men drinking more. All Kiwai islanders migrating more, thefts and everything. Just surviving. To the government you came at first no one spoke of the effects and no one reported the consequences. The government should have protected us from the corporate greed here, its environmentally illegal and the government acted without awareness or consultation like used car salesmen.

GG or Gabi is from Sepe, and he spearheaded the lawsuit. Sepe kids are notorious rascals. The older man stressed that educational standards are down and teachers are bad. The blind man from Parama, Smith, is the putative landowner's grandson, and no one has compensated him or his family for defamation and negligence. There are 2 landowners, the stone fish clan and the Geide

clan (a human clan with an eagle totem, smith's mother's clan) IDEAS is a Catholic NGO, its social aim was environment, health, women, aids and etc before ecoseeds. They ran the first aids workshop in 1991, Sila was at their women's desk. IHDDO is what its called now. Ecoseeds established in 95-6. Young people dying in Parama settlement of quick headaches, bellyaches and sudden death.

They cleared the riverbank from houses for barramundi farms, and Meremi Maina from Tureture and Kunane will look after the project for 2 years before they give it to Parama. They blocked part of a stream and are breeding and brought materials from POM for it in Parama. Yodakomi is where it'll happen, has been cleared for it. Breeding with polluted water? On the fly.

Tami tami is an ancestor from Ipisia (sp?) of pastor steven Bagau to Parama. You are eligible for compensation if you have a house in the village, for CMCA villages in Partama. Isasapwani and Onabasapu have both lost ground, on Kiwai Island.

Pipeline for gas in Parama, which sits on top of an oil basin. There are 6 oil strikes and a big dish of oil underneath. You people are already millionaires. Oilsearch (Ema Kitani) will know more about it. MRDC and minerals and gas minister's friend, Ema Kitari. Cunning.

Clans of Samari Village:

Major clan: Urabudai

S/c Sokomiabu

s/c Miparidai

s/c Gagarimaru

Major clan: Kurukaka

s/c Kauria

s/c Kakotamabu

s/c Koromabu

major clan: Mabere

s/c Abiomabu

s/c Pemoto

s/c Oiiduwo

Samari ILG no 9220



Samari Kona

OTML literature

OTML's most public statements are those posted on their web site, www.oktedi.com. As may be expected of a publicly traded company, these place an optimistic spin on even the most dismal of

facts. And yet, while they abide by a general news blackout on the company's research findings, there is a confessional tone to some statements that projects the appearance of transparency. Little is made of landowner discord, of failures to comply; and the need to stay the course and fend off social debacle is emphasized. Some of the more puzzling statements have been emphasized in bold case below:

Introduction

The community and environment are strongly linked at Ok Tedi.

Despite the mine's impact on the river system and their subsistence livelihoods, **the people of the Ok Tedi and Fly River have strongly endorsed its continued operation.** This is in recognition of the broader economic and social benefits that the mine has generated.

For OTML, the challenge going forward is to minimise the mine's future impacts, whilst maximising its social and economic benefits.

.... Since 1990, OTML has contributed approximately K57.2 million for projects to aid more than 100 villages along 1,000 kilometres of river.

Impacts Of Mining

Mining at Ok Tedi has caused environmental impacts that are significantly greater than were projected at the time of mine planning and commissioning in the 1970s and 1980s.

Each year, the Ok Tedi mine discharges about 90 million tonnes of waste rock and tailings (mined and crushed rock after approximately 90 per cent of the copper has been removed) into the Ok Tedi ('Ok' means 'river' in the local language). **This discharge is carried out with PNG Government approval.**

The mine has the greatest impact on the Ok Tedi, and the river bed has been raised in the upper Ok Tedi by many metres due to the rock and sand released into the stream. In the lower Ok Tedi, where the river leaves the foothills of the Star Mountains, over-bank flooding is common because of the flatter river grades.

Vegetation dieback

The build-up of mine-derived sediment in the lower Ok Tedi and Fly River has caused a rise in the riverbed, resulting in over-bank flooding and sediment deposition on the flood plain. The increased inundation stresses and, if prolonged, kills flood-sensitive vegetation along the riverbanks and on the floodplain. This phenomenon is known as "dieback".

OTML monitors the amount and distribution of dieback through satellite images together with ground surveys. Dieback is progressively increasing as the amount of sediment in the rivers increases and moves downstream. Based on the observed dieback over the past nine years, and extensive modelling undertaken for the Mine Waste Management Project, the maximum amount of forest affected by dieback may eventually reach about 2,000 square kilometres.

The total area of vegetation affected by flooding in 1992 was 18 square kilometres. By 1995 this had increased to 106 square kilometres, in 1997 was 478 square kilometres, and in 2000 was mapped at 1,317 square kilometres. Mapping in 2002 recorded a total area of 1,294 square kilometres. This slight reduction from the 2000 figure reflects the additional dieback caused by the wetter than normal La Nina event which followed the 1997 El Nino drought. These wetter than normal conditions lasted until about August 2001. **The square kilometres listed here do not include dieback affected areas that are recovering.**

The forest affected by dieback is predicted to slowly recover by natural processes once the mine closes and release of sediment stops. Rapid regeneration of forest has been recorded over about 170 square kilometres with most of this associated with removal of sediment by dredging at Bige. **Also, forests stressed by prolonged natural flooding over the past few years are now recovering as river levels return to more normal levels.**

Vegetation is returning to dieback areas in the form of wetland grasses and shrubs that are more flood-tolerant than the original forest communities.

The dieback and other changes in vegetation have affected people living in villages along and in the vicinity of the rivers. The major impacts include loss of gardens, reduced supplies of sago palm (a staple food source) and more difficult travel due to flooding. **These people are compensated under a number of compensation arrangements.**

Other impacts

Copper levels in the river system are elevated due to copper in mine waste, but they are still well within Australian, PNG and World Health Organisation drinking water standards. Typical within tropical areas, villagers along the river system **obtain their drinking water from smaller tributaries rather than the main river** channels, although water in the main channels is safe to drink once silt has settled.

Fish numbers have dropped significantly in the Ok Tedi and the Fly River below the Ok Tedi junction and down to the Strickland River junction. This is thought to be due to sediment smothering fish habitat in the main river channels. **Fish numbers and variety in the Fly River flood plain and off-river water bodies appear to be unaffected by the mine-derived sediment.**

Independent studies have shown that **mine sediment in the Fly River catchment has not affected the Torres Strait or the Great Barrier Reef.**

Research into mine waste management

In 1996, OTML set up the Mine Waste Management Project (MWMP). The project brought together international experts from a wide range of disciplines to undertake an extensive two-year study of the engineering, environmental, social and risk components involved in mitigating the environmental impacts of the mine waste.

The MWMP also included a two-year, US\$60 million, dredging trial in the lower Ok Tedi to investigate the effectiveness of dredging as a measure to reduce sediment build up in the river system.

After reviewing a large number of mine waste management possibilities, four possible options to deal with mine waste issues at Ok Tedi were examined in detail in the MWMP:

- to continue the current dredging trial in the lower Ok Tedi
- to dredge and pipe mine tailings to a storage area on land
- to do neither, or
- to close the mine early.

The MWMP comprised a comprehensive risk assessment integrating information from **all environmental, health, engineering, social and economic studies.**

large component of the overall risk assessment, the Human Health and Ecological Risk Assessment (HERA), was overseen by a group of five senior independent scientists from around the world. This Peer Review Group provided advice, recommendations and peer review of all studies relating to the HERA.

The final Mine Waste Management Project Risk Assessment was completed and provided to the PNG government in August 1999.

The risk assessment **concluded that the environmental effects, particularly over-bank flooding and vegetation dieback, are likely to expand significantly. It determined that none of the options examined offered a clear solution to the environmental and social impacts of the mine's operations.**

Many of the reports from the MWMP, including reviews by the Peer Review Group, are available from the reports section of this web site.

World Bank Review

The government requested its own consultant and the World Bank to review the Risk Assessment, and set up a task force to advise the government on its response to these findings.

In January 2000, the World Bank reported that **“from a purely environmental perspective, the risk assessment suggests that the Ok Tedi mine needs to be moving towards closure as soon as possible”, but that “immediate closure would appear to carry with it the worst social impact”.**

What is OTML doing now?

Consultation: The government and OTML **undertook an extensive consultation process with local people to inform them of the environmental predictions and to give them the opportunity to express their views on the future of the mine.** The communities within the region affected by the mine — which include about 50,000 people — **strongly endorsed the continued operation of the mine until planned closure. This community endorsement has been formalised through a Mine Continuation Agreement process.**

Dredging at Bige: The dredging of the Ok Tedi at Bige, the trial period of which was scheduled for completion in March 2000, will continue on a permanent basis at the request of the PNG Government. To date, almost 60 million tonnes of sand and gravel had been removed from the river, representing about two years of tailings production from the mill. Significant recovery of dieback-affected forest has accompanied this dredging.

ARD studies: The high sulphide content of the Mount Fubilan ore body means that **some potentially acid-forming mine wastes are generated.** This potentially acid-forming material **needs to be managed so that environmental impacts do not occur** due to “acid rock drainage” (ARD) where acidic water, with associated high metal content, is released to the environment.

To date, small areas of ARD have been observed on some sandbanks in the lower Ok Tedi during dry periods when the river level is low. **Analysis of river waters indicates no significant impact on water quality** with alkalinity levels remaining high and copper concentrations within safe limits.

An extensive ARD monitoring and management program is in place. Active measures for managing ARD include adding additional limestone to waste rock at the mine to maintain acid neutralising capacity in the waste rock dumps. **Also, preferential dredging of high and low sulphide sediments is being investigated at Bige, to allow better management of the ARD potential of the dredged sands.**

Mine and mill improvements: OTML **has also been investigating** a range of mine and mill improvements to increase copper and gold recovery and reduce copper and sulphide minerals released to the river system. Results to date **indicate that modifications in the mill could increase copper and gold recovery by up to five per cent. These investigations have also shown that 80 to 90 per cent of the sulphur in mill tailings can be removed in the mill, but there is no clear, safe solution for disposing of the sulphide produced by this process.**

PNG Sustainable Development Program Ltd

In February 2002, BHP Billiton divested its 52 per cent shareholding in OTML into a Singapore-based company, the PNG Sustainable Development Program Ltd. (the Program Company).

....

Sustainability Projects

OTML's major sustainability projects to date have included:

- community agricultural projects that teach local people different farming methods and encourage them to try new, sustainable crops and stock that can provide food to eat, such as rice and poultry, and incomes, such as rubber and fish farming
- business development projects that teach business skills, support entrepreneurs, and help local communities to identify business opportunities that are not dependent on the Ok Tedi mine for success
- the Western Province Capacity Building Program, which involves preparing development plans, infrastructure and financial management systems for the local level, district and provincial governments in the Western Province, and

- women's projects including workshops to strengthen women's organisations and ongoing programs covering issues such as health, nutrition, leadership skills and business development and management.

OTML's sustainability projects were previously administered through the External Relations and Community Services Division. They were transferred to the Ok Tedi Development Foundation in mid-2002...



Management is targeting more stringent cost control measures and cost reduction strategies in the coming year.

Projected mine life has been extended to 2012.

Press Release: Roger Higgins---1 May 02--Ok Tedi: Creating Community Partnerships for Sustainable Development Roger J. Higgins Managing Director, Ok Tedi Mining Limited, Papua New Guinea The Ok Tedi mine in the Western Province of Papua New Guinea is a well known producer of high quality copper concentrate for its customers around the world. For most people, the other facet that you will "know" about Ok Tedi is how the mine has polluted the mighty Fly River, one of the largest river systems in the world. It is not the purpose of this paper to play down the environmental damage that the mine has caused. However, Ok Tedi is a far more complex and fascinating story than this, and there is more to know. Ok Tedi, aside from being a mine, is a representation of the plus and minus elements of development in a developing nation. It could be mostly bad if we did not work with our communities as partners in that development. Ok Tedi Mining Limited (OTML) has an explicitly stated goal of "... working together to create a responsible balance of our continuing mining operations, environmental effects, sustainable development in the Western Province, and national economic gain." Ok Tedi is a complex and challenging story about a people's passion for the development that mining can bring, and the work that OTML has done to bring development to PNG's most isolated province.

Mr. Faulkner said, "The CMCAs covered nearly 50,000 people, and provided them with a form of compensation that would help them to build a future. "Ok Tedi is a fundamental part of the lives and economy of the people involved in the CMCAs. That they are satisfied with these arrangements is also fundamental to Ok Tedi's continued operations," he said. "I believe we have in place a mechanism that works for the people of Western Province whose lives have been changed by the mine in so many different ways. Clearing the decks of this litigation is a step forward in our efforts to include all affected villages in our agreements. "We can now get on with operating this mine to the benefit of all parties, which includes generating benefits for people down river, but also for the PNG nation as a whole."

The Ok Tedi mine is one of the largest businesses in PNG and a major contributor to government revenues through royalties, taxes and dividends. Ok Tedi also generates most of the economic activity in PNG's Western Province.

Inquiries: Keith Faulkner 0011 675 548 3320
or Barbara Sharp 61 (0) 411 705 456

Ok Tedi Mining Limited
Second Quarter results (Period Ended 30 June 2005)

Production	2005	2004	2005	2004
Head grade copper (%)	0.8	0.83	0.90	0.84
Head grade gold (grams per tonne)	0.91	0.86	0.92	0.85
Mill Throughput ('000 tonnes)	6,646	,324	12,690	12,555
Copper (tonnes)	48,454	49,453	94,368	85,336
Gold (oz)	139,155	143,264	222,541	255,662
Sales				
Concentrate (tonnes)	153,454	185,481	355,094	345,365
Contained copper (tonnes)	45,525	51,125	103,019	95,951
Contained gold (oz)	125,684	148,436	284,442	230,022

Production Mill throughput in the second quarter of 2005 was adversely affected by increased ore hardness from the mine, however this was offset by higher grade copper and gold in the feed from the mine.

First quarter 2004 mill throughput was affected by the failure of one of the mine's two semi-autogenous grinding mills. Second quarter 2005 sales were lower than the corresponding period for 2004 due to timing of shipments, however on a year to date basis sales of contained metal were 9% greater for copper and 5% for gold.

From OTML 2004 Annual Report:

Our commitment to safety however is constant. **“Zero Harm ” [to employees!—ed.] is our goal** and whilst we still have a long way to go, safety performance for the year showed steady improvement from the two previous years. There were four lost time injuries, fortunately none serious, one OTML employee and three contractor employees.... Our “Take Five and Stay Alive ” campaign, a technique designed to be a last line of defence against making an unsafe act, was re-launched during 2004. Unfortunately, as in many places, using public roads and driving light vehicles is one of our major risks, and in which our record is poor. Our road safety campaigns are aimed at employees, contractors and the public at large. The year commenced poorly when one of our two semi-autogenous (SAG) mills failed and required extensive repairs. The year finished with a lengthy spell of dry weather, which constrained Fly River shipping and resulted in high copper concentrate inventory levels. During the course of the year there were many changes to the mining industry, copper markets, cost pressures, management team, operating practices and delivery of our obligations to the community, all of which required prompt and effective response. At the close of the year we had met the challenges and had either overcome the problems or had plans in place to meet them. **Review of mine plans and reserves saw an increase in mine life, from 2010 to 2012.** The final mine pit has not changed significantly and the same volume of rock will be mined, but more material has been classified as ore. The change in mine life is consistent with the Ok Tedi Mine Continuation (9th Supplemental) Agreement Act and the Community Mine Continuation Agreements.

OPERATIONS

The failure of the SAG mill was a serious setback which required skill, expertise, creative thinking and dedicated hard work to resolve and to minimise the impact on production. It is a tribute to the maintenance, planning, operations and logistics teams that they were able to find a repair solution for the seriously damaged mill, and implement the repair in eight weeks. Mine and mill personnel reconfigured plans and parts of the plant so that the latter part of the eight week outage was at 75% of planned output from about half production capacity... Total production of 173,370 tonnes of copper and 16,313 kg of gold for the year was disappointingly 10% and 7% respectively below Plan; however, given the difficult circumstances it was a creditable result.

COSTS

Of concern is the growing cost of operations. The falling value of the US dollar and appreciation of the Kina and Australian dollar has a negative impact on OTML's costs. During the past year, this factor alone has increased costs by approximately 10%. In addition, the prices of operating spares, mill reagents, grinding media, fuel and explosives have risen steeply. **The increase in costs is unsustainable and OTML appears to have slipped in its competitive position compared to the world's best producers, placing us at risk when the metal price**

cycle turns down. Management is targeting much more stringent cost control measures and cost reduction strategies in the coming year. It is not acceptable for us to concede that these are uncontrollable external cost pressures. We must find ways to offset or reduce their impacts if we are to remain competitive, because our competitors will certainly be attacking these costs. We have to run harder to keep up.

...

MARKETS

The copper market is in new territory for the miners. Stocks of finished copper are at record low levels, driving a high copper price because demand, from China in particular, is so high... Who can predict how long the favourable market for finished copper will last? Will the pressures on the US dollar and the Chinese Yuan cause a major shift in world economics? OTML cannot predict or control these matters - all we can do is focus on becoming as competitive, productive and efficient as we can in order to secure our future.

COMMUNITY RELATIONS

We underestimated the difficulty in delivering against our agreements (CMCA 's) with the river communities. The logistical and communication challenges presented by the vast Fly River system saw our performance in delivering projects to communities fall below their, and our, expectations. During the year we changed our approach from six monthly patrols to a **more frequent contact by setting up permanent bases at strategic points** along the river. From these bases we are able to conduct our programs, projects and support more efficiently, and hear people 's concerns more directly. **This approach in the South and Middle Fly has seen much improved relationships and satisfaction in the communities.** This more outreaching style **enabled us to address some of the severe health problems in the South Fly. By working with the Provincial Health Authorities we were able to mount an extensive health patrol to treat an outbreak of yaws** in the South Fly, and to address many other basic health issues. This co-operation with the authorities has grown into a province-wide co-operative effort to deliver improved immunisation, disease prevention, and ante-natal and post-natal care.

OUTLOOK

The coming year is full of opportunity for OTML and its stakeholders. **In the three years since the departure of BHP Billiton from the project, the shareholders, the State, the employees and contractors have enjoyed dividends and benefits greater than those anticipated at the time of the passing of the Ninth Supplemental Agreement Act.** Some of that good fortune arises from extremely buoyant prices, but most importantly, we have in place a skilled and enthusiastic team, a mine that is in good shape and unprecedented support from the community. We now have a mine life through to 2012, and in that period OTML should continue to provide superior benefits to all stakeholders.

KEITH FAULKNER
Managing Director



Daru

Various press

Post Courier

Wednesday 11th April, 2001, p. 27

Landowner groups want mine to go on

MORE Ok Tedi landowners yesterday pledged support for Ok Tedi Mining Limited to continue operations until the mine life ends in 2010. This was despite the environmental impact concerns that have fuelled the potential exit of major shareholder, BHP. This follows the signing of a heads of agreement with representatives from 17 out of 19 villages from the Lower Ok Tedi and following an intense consultation process which began in May last year. A couple of villages' representatives were not there to sign, due to customary obligations to attend a funeral. The signing by the 17 pledges the support of about 5000 local people and adds to the growing number of regional supporters, including people from the Middle Fly, Highway, North Ok Tedi and mine lease area villages for OTML to continue mining. Chairman of the Lower Ok Tedi negotiating team, Alex Maun and Moses Oti, two of the four lead plaintiffs in court proceedings against OTML over environmental damage, were key players in reaching the agreement. OTML executive manager Robin Moaina signed on behalf of the company. OTML managing director Roger Higgins, who is overseas, will sign later. Mr Moaina said the signing was a positive first step in an important process for the communities in the Lower Ok Tedi region.

from www.inmetmining.com

Ok Tedi is one of the world's largest copper and gold mines and is situated in the Star Mountains region of Papua New Guinea. The open pit mine has been in production since 1985.

Inmet's interest	18%	Type of ore deposit	Massive copper and gold porphyry deposit
Expected mine life	2013		
Employees	1,990	Mining method	Open pit drill and blast

Highlights (100%)

	Six Months Ended June 30, 2005	Year Ended December 31, 2004	Year Ended December 31, 2003
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Tonnes of ore milled (thousands)	12,700	26,200	28,200
Grades:			
Copper	0.9%	0.8%	0.8%
Gold (grams per tonne)	0.9	0.9	0.8
Recoveries:			
Copper	83%	83%	84%
Gold	72%	71%	68%
Production:			
Copper (tonnes)	94,400	173,400	195,700
Gold (ounces)	272,500	524,500	503,400
Cash costs (per pound of copper)	US\$ 0.55	US\$ 0.55	US\$ 0.44
Total costs (per pound of copper)	US\$ 0.61	US\$ 0.60	US\$ 0.55
Capital expenditures (millions)	US\$ 4.3	US\$ 25.7	US\$ 8.5

Financial Highlights (thousands of Canadian dollars)

	Six Months Ended June 30, 2005	Year Ended December 31, 2004	Year Ended December 31, 2003
Financial results			
Gross Sales	\$ 108,742	\$ 154,244	\$ 84,327
Net income	\$ 26,783	\$ 30,984	\$ 16,757
Cash flow provided by operating activities	\$ 36,701	\$ 37,300	\$ 42,624
	As at June 30, 2005	As at December 31, 2004	As at December 31, 2003
Financial position			
Cash and short-term investments	\$ 24,515	\$ 18,775	\$ 20,541
Net working capital	\$ 26,598	\$ 28,426	\$ 29,586

Note: Financial results include 18 per cent of Ok Tedi from July 1, 2003.

The Ok Tedi mine is located high in the rain forest covered Star Mountains of Papua New Guinea. Prior to 1981 the local Wopkaimin people lived a subsistence existence in one of the most isolated places on earth. That was before the 10 000 strong town of Tabubil suddenly appeared in the middle of their community. The Ok Tedi mine was built on the world's largest gold and copper deposit (gold ore capping the main copper deposit). From the very beginning things did not go according to plan. It was originally envisaged that the mine tailings would be stored in a dam, and after the settling of solid particles, clean water would flow down the Ok Tedi River, then into the Fly River for the 1 000 km journey to the sea. It would have been an engineering marvel to build such a dam on the side of a mountain where it rains more than 10 meters a year and earthquakes are common. The half-built tailings dam collapsed in 1984 and the mine went ahead without a waste disposal plan...

Where do you put 90 million tonnes of mine waste a year?

The tailings are composed of fine-grained rock containing traces of copper sulphide and residual cyanide. The build up of tailings in the lower Ok Tedi has caused a rise in the river-bed, flooding and sediment deposition on the flood plain, leading to a smothering of vegetation ("dieback"). To date, about 1 300 square kilometres of dieback has been observed. Up to 2 040 square kilometres of forest may ultimately be affected. These forests are expected to take many years to recover after mine closure (Ok Tedi Mining Limited).

Changing people's lives

Some 50 000 people live along the Ok Tedi-Fly River system. Sediment from the mine has reduced the amount of fish in the Ok Tedi and Middle Fly Rivers by 80%. Changes to the river-bed have increased flow rates in the river, producing dangerous rapids – a major hazard for locals whose main form of transport is a canoe. The thick mud that blankets the river banks in many places has destroyed the traditional gardens. This mud also makes it difficult to get down to the river to collect drinking water, bathe and fish. However, along with this hardship has come prosperity for many people. Health care and education have improved enormously and many local businesses have started.

What can the people of the Ok Tedi and Fly Rivers expect

The mine is due to close in 2010. The Papua New Guinea Sustainable Development Program Company currently receives dividends of millions of dollars. Two thirds of this revenue is invested in a long-term fund (that will enable the company to contribute for at least four decades after the mine closes). The remaining third is spent on current development projects in the Western Province (home of the mine) and other areas in PNG. It is too early to tell whether the fund will be able to successfully address the continuing environmental damage or achieve significant sustainable development and job creation. If not, the legacy of 30 years of mining in the clouds may be lasting environmental damage and cultural dislocation.

Ethics update BHP's view of Ok Tedi

By Jane Williams
The Age
July 16, 2004

BHP Billiton chief executive Chip Goodyear said yesterday the controversial Ok Tedi mine in Papua New Guinea would not have been developed under the company charter the group works by today.

Speaking at a global business ethics conference in Melbourne, Mr Goodyear said companies with poor track records in health, safety, environmental responsibility and sustainable development would have trouble getting licences to operate in the future.

BHP Billiton's charter, adopted during the merger between BHP and Billiton plc in 2001, states that the company must earn the trust of employees, customers, suppliers, communities and shareholders.

"Companies with a poor track record in these areas will find it harder to gain regulatory approvals and community support for new developments in the future," Mr Goodyear said.

Included in the charter was a document in which BHP Billiton said it would no longer proceed with development in which tailings from the milling process were dumped into rivers.

"I think it is important to note . . . mines can be developed that way, but unfortunately that (Ok Tedi) was not one," he said.

The mine was closed in 2002 and BHP Billiton's 52 per cent equity stake was folded into a holding company, with future profits going to fund short and long-term sustainable development projects across PNG.

Mr Goodyear said that while the charter had been used to exit Ok Tedi in a positive way, the mine was not a development of which BHP Billiton was proud.

BHP Billiton shares closed 14¢ up yesterday at \$12.80.

Discussion

The Ok Tedi disaster has established its own dialectic, a spiraling cybernetic of aggression and retreat. But it has its own ironies, too. The more damage is done to the river system, the more costly repairs become; the more burdened the company grows, the less likely it can pay commensurate compensation; and so on. The longer OTML stays, the greater damage done to these communities and their environment. The greater this damage, the more cynical and fatalist these communities grow to their suffering. The more fatalist the landowners become, they less likely they are to press for reparations. The longer the company stays, the hungrier and more divided these communities also grow, and thus more despairing of justice.

But OTML presents the social benefits of the mine as existing in inverse proportion to environmental ones. The more environmental damage, that is to say, the more social benefits. Social risks—meaning the ‘costs’ of mine closure—are also in direct inverse proportion to environmental ones. For some reason the OTML literature and press releases presents this equation as fair, natural, and supportable, not to mention ‘sustainable.’ The assumption is that Western Province landowners can trade their old lives for new ones with OTML, and that once they’re on that route, turning back is more dangerous than not.

It is by presuming great social benefits (and their converse—the terrible social costs), that the company can justify belt-tightening and not view it as flagrant profiteering. But if the social benefits have been challenged over and over again, as they have been, then the projections of social disarray (the crime, domestic abuse, medical and educational neglect) are in no way certain. After all, this disarray contrasts to what?

Then there is the public projection by the company that the longer the mine operates, the greater the province will come to depend on OTML. Presently this dependence is little more than chimera to all but pork-rolling politicians and the people directly employed by the mine. One would assume that the more the company actually does to fulfill its compensation and ‘development’ obligations to these communities, the less ‘dependent’ they would actually become, inasmuch as development should lead to self-reliance. And so this presumed dependency is more ideational than real, all about the hopes and needs pinned on the corporate ethics of one somewhat discredited mining company. Is there a reason why OTML does not talk about self-reliance and autonomy in its projected benefits to these communities? Because there would appear to be no chance for these communities to ever become self-sufficient as they had been in the past, now that their environment has been so degraded. It is not about the degree to which they have ‘developed’ and thus given up their subsistence lifestyle, but about the inability to ever achieve this self-sufficiency again in their environment. The object is certainly not to create self-supporting peri-urban communities now, but to enable them to be handed over to viable local, provincial and national governments as growing revenue bases.

OTML is only one of a range of agencies and contractors providing government services in Western Province—others are missions, NGO’s, major aid donors (AusAid for example) and transport companies. Logistical problems can be expected, and in some cases, the outcomes are serious. The smaller the operator, the less able they may be to suffer interruptions of services, to endure unpaid accounts or weather the inconveniences of distance and poor infrastructure. OTML is a giant relative to other services providers in the province. And yet it behaves like a small NGO, unable to invest in sufficient shipping vessels to distribute the construction materials stacked up in Kiunga and Daru; blanching at correspondence or requests from lowly villagers; abandoning capital improvements without plans for maintenance. More to the point, these mine-affected communities are unlike any other landowner communities in the shadow of resource projects in PNG. If you go to Porgera virtually everything in a wide radius is stamped with ‘PJV’—oil vehicles, aid posts, school texts, water tanks and t-shirts. Nothing like that exists for the Fly and Ok Tedi landowners. Instead, virtually every village along the impact zones credit the church or an NGO for the few services they do enjoy. In Bosset, for example, they told us: ‘Everything comes through the Catholic Mission and AusAid, not Ok Tedi.’

The various Ok Tedi agreements prescribe how the company should act in respect of the project area landowners, who essentially form two groups: the SML royalty-earning landowners and the various LMP leaseholders. About half of the latter live in the OFSMP study area. All OTML documents project terrible social fall-outs with an early mine closure, which is why the environmental benefits of early closure must be weighed against the social ones. But these impacts are more assumption than deduction. Tens of social impact reports have now been produced, all of which note the deleterious effects of rapid social change and political corruption attendant to the mine opening in the province. Health and environmental dangers are also irrefutable. Thus, the contention that closing the mine would be even more dangerous to the social good—crime and chaos closely anticipated—compares poorly to the dangers already recorded. There is always a double-bind in development projects coming to a close. But all the evidence points to the social benefits of closing the mine—with an appropriate mine closure plan. If crime rises while the environment, health and community integrity improve, it is always going to be a complex problem. But if the environment, health and social cohesion continue to suffer, crime is certainly not going to subside.

The patronizing tone taken toward the West Ningerum Pressure Group and their reports; the lack of information disseminated to the affected communities (as if to imply engagement would acknowledge culpability); the refusal to enlist or purchase appropriate ships for disbusing the

CMCA-promised materials; and the very ambiguity of the mine's lifespan—are all gestures of ill will by omission.

The World Bank's notes on the Mine Waste Management Project Risk Assessment by OTML summarizes the main findings. That, apart from the environmental risks, there are serious social risks that continue to exist and have never been properly addressed by OTML. There needs to be more work to bring the social analysis up to the level of the environmental analysis. The MWMP says that from the environmental standpoint, the best thing would be to close the mine immediately, whereas from the social standpoint, this is potentially dangerous—although the MWMP does not provide details on these costs or on the closure details, socially. “This is a critical shortcoming of the Risk Assessment since it is not possible to assess the appropriateness of the social and environmental mitigation measures that are being considered in the mine closure plan and whether international best practice is being followed.” Nor, the WB goes on to say, does the RA even evaluate the costs from the government's point of view, financial or otherwise. They lay out 4 closure/nonclosure options, which the WB says does not cover all possibilities, and “the Risk Assessment fails to consider the option of early mine closure at such time as a mine closure plan is in place that addresses the social impacts in a satisfactory and sustainable manner.” The options are: Dredge Option (dredge until 2010); no-dredge Option (discontinue dredging at end 1999); Tailings Option (dredging plus a tailings dam); and Early Closure Option (with 10-year after care program).

One informant in Kawok explained why the lawsuit communities have been able to combat social strife—like crime and political dissension, unrest. *“Nogat problem namel ol yut na elders bikos mipela ples stap wantaim long law suit olsem mipela olgeta wokbung wantaim.”*

Also note the comment from Membok Village, that OMTL health officers visited once but did nothing since, and haven't sent back whatever their findings were. They said specialists should be sent to conduct necessary not unnecessary medical interventions. That is, don't send an eye doctor where there are no eye problems but plenty of yaws.

CMCAs have divided and conquered. But also, they are new hurdles to jump. As an informant in Kavianaga says: When we want to go and put their demands to Ok Tedi, they say you cannot come to us directly, you must go through the process because we are working through the CMCAs. So you have to go through the Zamby Association and present your demands. They tell us that this means we are questioning the legality of the CMCAs. So now it's very hard for us to go and talk directly to OTML.

Banks and Ballard (1997:204) :

There are a number of 'bottom lines' highlighted by the Ok Tedi debate in general, and the settlement in particular. But perhaps the most significant of all these is the need for greater public accountability with an ongoing process of stakeholder identification and involvement to ensure their concerns are adequately addressed at an early stage.

In Bosset they insisted consultants must interpret the agreement for them before they sign any review; the terms must be explained in a simple language that they all fully understand. There is a yawning gap between what the effected communities claim to have been told and what OTML officer claim to have told them. As Burton concedes (1995:58):

The [OTML] Environment Department staff are tired of hearing that 'they never explain what they are doing' when, in their own eyes, they have discussed the matters any number of times with village spokesmen during field trips. However, the key is that it is suspicion of the company's motives in sampling that is the problem... 'Nobody has told us' can generally be

translated into 'we feel ignored'. On the issue of lack of government consultation, it is quite clear that the Project Co-ordination Section in the Department of Mining and Petroleum should take on a much greater consultative role than it does at the present. However, repeated budget cuts leave this section no better endowed than any other department and the resources to mount (or commission to be done by someone else) the kinds of patrols that are needed are well beyond its means.

Some say the 1990's burnt the company out. The administrators grew weary of disbursing funds to corrupt leaders and seeing nothing come of their community investments. Unlike the Porgera context, where virtually all development is part of some company joint venture with local businesses, little has 'developed' from all the monies thrown to landowners since 1984. Few villagers have been given spinoff or joint venture opportunities (that might, for example, help distribute the CMCA goods and services), which means that investment at present has nothing to build upon. Indeed, if it is easy to see how the villagers are frustrated and feel ignored by now, it is also easy to see how company workers feel dispirited by the last twenty years' 'community development.' This does not mitigate the need for communication and rapprochement now, but it goes some way towards explaining why company officers have been loath to listen to two decades' worth of pent up concerns.

The Western Province is the least developed of PNG's provinces. Given the fact that these communities are under the wing of one of the country's largest development projects, this says a lot about how unconstrained OTML's operations have been. It speaks to the enormous waste of money and effort that has been spent, creating a disaster of such overwhelming proportions that, like the aftermath of a famine or a tsunami, millions more must be sunk into the disaster before it even reaches the level where 'development' may begin.

Both the company and the stakeholders have all signed their own Faustian contracts. It is indeed beyond the means of any company to meet the real costs of this social and ecological disaster. And it is beyond the means of the PNG Government to take an ethical position at this stage. But it is not beyond the company or the government to inform the affected communities of the real dangers they face and the actual human costs they can be expected to pay with each of the various mine continuation/closure options.

At this point it is less about culpability than safety. These impact communities are all victims of a corporate disaster and continue to be victims of a silence that would minimize company culpability. But the real question seems to be how these victims can safeguard their health and livelihoods from now on.

There are logistical difficulties to communicating with these villages, and to distributing the materials pledged by the agreements. For the last year the MS Rankin, owned by Tony Collins, has been plying the Fly River with OTML-contracted health workers and construction personnel, delivering some of these materials to the village. While Collins could not, in conversation, confirm or deny whether some of these workers have also conducted CMCA awareness programs, he does say that OTML is struggling to deliver these materials as promised by the CMCA's. In his opinion they are genuinely working to comply with the terms. The MS Rankin is not the only vessel contracted to distribute supplies either, (the MV Golden Dawn was at one point contracted to do so), and other smaller boats can also be seen running transport and rubber by OTML in behalf of the villages. There is simply more work than there are boats available to accomplish it, Collins says. The company, however, does not wish to enter the shipping business and therefore has not stepped up to bring in their own vessels. As of late June, OTML had 60 containers of materials waiting in Kiunga to be distributed and no way to do so. Collins feels that

OTML is trying very hard to distribute the goods, and that there are company-based bureaucratic obstacles at fault: monies are always delayed, he explains, shuttling through departments.

The easiest answer seems to be that OTML has consciously decided to avoid regular or sustained contact with these communities in the belief (perhaps) that too much information will lead to too many demands. Unfortunately, while there is some validity to this in all corporate negotiations, the alternative in PNG is a kind of isolation that breeds more antagonism and contention than necessary. A library of anthropology has already been published on Ok Tedi, and virtually all of it shares the assertion that neglect is the first and most serious complaint of the affected communities. Listen to us; believe us; help us understand. Villagers have been saying this to OTML for 21 years now. And to this date, OTML has consistently responded in patronizing terms, whether this be in legalese, corporate-speak or the arrogance of silence. There appears to be a tacit assumption that the only way OTML can deal with communities is as voiceless pawns in the boardroom.

What is 'best practice' for OTML at this point? The company continually asserts that villagers along the Ok Tedi and Fly Rivers will be more adversely affected by mine closure than by the devatation of social, material and ecological well-being they now face. The assumption is that there is always a quid pro quo, and that there are very real gifts being offered by the mine in return for the loss villages have incurred. The following passage from Inmet Mining's web page is a good expression of this (emphasis added):

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Appendices

1)

INDEPENDENT REVIEW REPORT ON THE OK TEDI COMMUNITY MINE CONTINUATION AGREEMENTS AND RELATED MATTERS.

Prepared for Oxfam Community Aid Abroad.

Dr. Lawrence Kalinoe

The Mining (OK Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001 legislatively sanctions and gives full and binding legal effect to six Community Mine Continuation Agreements (CMCAs) which OK Tedi Mining Limited (OTML) entered into with communities in the affected areas of the mine from the Mine area itself, to North OK Tedi, lower OK Tedi, Highway, down to Middle Fly and right through to South Fly. The CMCAs are mechanisms through which customary landholders of the affected communities are organized and appropriate compensation packages are stipulated for these affected communities based on the magnitude of environmental damage in the respective communities. The CMCAs are legally binding contractual agreements through which the affected communities and OTML are bound by – with specified duties and responsibilities. On the part of the communities under the CMCA, they undertake not to pursue separate compensation lawsuits outside of the CMCA and on the part of OTML, it undertakes to pay the agreed compensation payment specifically specified under the respective CMCA compensation packages.

In essence, under the terms of references of this review report, I am required to examine the consultation process leading up to the execution of the CMCAs to ascertain whether or not the methods, processes and procedures of consultation which OTML used fairly and properly informed the communities as to the workings, requirements, implications and consequences of signing the CMCAs.

Hence under the first term of reference, I am required to review the CMCA and consider their impacts and implications for the people in these six CMCA communities. From this review, I note that the combined effect of clause 11.2 of the CMCAs and Section 8 of the Act is that irrespective of the granting of express

authority or consent by a member of a CMCA community, the signature of a community representative on the CMCA binds all the members of the community or clan in the community. Evidence from the field research show that there are two groups in these affected communities: those who have agreed to be part of the CMCA process and who are referred to as the CMCA groups on the one hand, and those who have refused to join the CMCA and have remained with the Rex Dagi and Gabia Gagarimabu led lawsuits and are referred to as the lawsuit group on the other hand. This of course then throws up an interesting legal issue: that of whether or not it is proper to unilaterally by the force of law force one's consent when that person has clearly not given his or her consent at all and has expressly refused to give his or her consent. The review of the CMCAs also shows that by the operation of clauses 15 and 16 of the CMCAs, if the courts in the Rex Dagi and Gabia Gagarimabu led lawsuits hands down decision in their favour (and against OTML), then OTML will not fully honour the compensation packages set out under the six CMCAs. The irony of this is that Rex Dagi and Gabia Gagarimabu are not parties to the CMCA and vice versa people in the CMCA are not parties to the lawsuit led by Rex Dagi and Gabia Gagarimabu. Therefore, why should events in other quarters subject and vitiate a mutually concluded agreement. Again, this throws up interesting legal issues.

Under the second term of reference, I am required to do field research and determine whether men and women from the sample communities of the field research were formally and fairly informed of the workings, requirements, implications and consequences of signing the CMCAs. Findings from the field research shows that there were various consultation meetings conducted by OTML and government officials but such meetings were up to three hours at the most and at none of these meetings drafts of the CMCAs were discussed. These findings therefore suggests that the people in the sample communities may not have been fully informed, particularly of the implications and consequences of signing the CMCAs.

Under the third term of reference, I am tasked to assess the methods used by OTML to inform both men and women in the sample communities about the workings, requirements, implications and consequences of executing the CMCAs. The field research indicates that the most common method used by OTML was through community consultation meetings. OTML and government officials would turn up in one village and hold a consultation meeting for two to three hours and then moved onto the next village. These meetings were gender blind. Hence all the people in their respective villages were spoken to together at the one and same gathering. No attempt was made to speak with and consult women separately. In Schedule 1 to the CMCAs, the various community consultations methods for the respective CMCAs are set out. Amongst others, it is stated that OTML used a video called "Ting Ting Nau Long Bihain Taim" (meaning, think now for the future) and showed this video to village communities. This video contained information on environmental predictions. Out of the twenty interviewees to whom I asked whether or not they have seen this video, only one from a Kiunga – Tabubil highway village said yes. All the others said they have not seen the video. Again in Schedule 1 to the CMCAs, one other method mentioned is the distribution of a information booklet: "OK Tedi the Future", produced by the Department of Mines and it is mentioned there that this booklet was distributed to the communities by the consultation teams. Again when I asked my twenty interviewees, whether they have read the booklet, only one from the South Fly area said he has a copy and has read it.

OTML also engaged PEACE Foundation Melanesia, a NGO to conduct skills development course to equip the communities to effectively engage in negotiations with OTML in the CMCA process. This course was well received by the selected community representatives who attended the course. These community representatives have however stated that they did not have the opportunity to utilize the negotiations skills from this course for various reasons but the main one being that there was not much negotiations in the CMCA process as the substantive texts of the CMCAs were "pro forma" texts and were not subject to negotiations.

The fourth term of reference required a survey and presentation of perceptions of men and women within the sample communities as to whether they believe the process and methods employed by OTML informed then of the workings requirements, implications and consequences of executing the CMCAs. Majority of the interviewees from the field survey responded that they were generally happy with the level of consultation for it was the first time that OTML had made real effort to widely consult with the communities in the affected areas, particularly in the Middle Fly and Lower Fly areas. They however

complained in the same breath that the meetings were usually too short and that they usually provided the listening ears. Hence there were no negotiations but consultations only.

The cumulative consequence of the above, therefore appears to be that methods, processes and procedures of consultations which OTML used may have been such that they did not fairly and properly inform the communities, particularly as to the implications and consequences of signing the CMCA, particularly those consequences as imposed by Section 8 of the Act and Clauses 11.2; 12; 13; 15 and 16 of the CMCA which strikingly militates in their operation against the interest of the communities.

1. INTRODUCTION

It was only after July 1999, when the preliminary findings of the Mine Waste Management Project (MWMP) were released, that Ok Tedi Mining Limited (OTML) and its shareholders accepted that the tailings (waste) management system of the mine since it started its life in 1984, has caused environmental damage. The MWMP was instituted by OTML itself in 1996, after various lawsuits were filed in the Victorian Supreme Court, and the related proceedings in the Papua New Guinea National Court where billions of kina in damages for environmental damages were sought by the affected people of the lower OK Tedi, Middle Fly River and Lower Fly River communities. Apart from these lawsuits, there were also concerns raised, both nationally and internationally, over the level of environmental damage that the operations of the mine was causing particularly from the NGO and academic sectors. It is therefore fair to say that it is these pressures which caused OTML to institute, the MWMP and the about turn which the Mining Company and its shareholders have now made: from initial denial, to being confrontational and hostile as reflected in the Mining (Ok Tedi Re-stated Eight Supplemented Agreement) Act and the Compensation (Prohibition of Foreign Proceedings) Act, to now the full acceptance and conciliatory compensation packages OTML negotiated with 142 out of 155 affected communities from Lower Ok Tedi, to Middle Fly, right down to the Fly River delta, stretching over 800 kilometres perpendicularly, under six separate Community Mine Continuation Agreements – as legislatively sanctioned under the Mining (Ok Tedi Ninth Supplemental Agreement) Act 2001.

This review examines the consultation process leading to the execution of the Six Community Mine Continuation Agreements (CMCA). Under the sub heading “Seeking Informed Consent”, Dr. Roger John Higgins, the then Managing Director and chief architect of the CMCA compensation packages, writes at pp 42 – p 43 of the magazine, PNG Resources Issue Three, 2003:

“In 1999, OTML and the PNG National Government embarked upon a consultation process with the more than 150 communities comprising the estimated 40,000 people in Western Province affected by the Mine.

The consultations took place over a period of more than two years, to allow people affected by the Mine to consider whether the mine should continue or be closed. These consultations covered the environmental and economic effects of mine continuation and mine closure”.

Given these elaborations, one must be entitled to ask: what constitutes “Informed Consent” and how does one go about obtaining informed consent? Is “informed consent” obtained through consultations? Primarily, this review addresses these issues.

This review report is prepared for Oxfam Community Aid Abroad, with the aim of informing it and its partners and affiliated organizations, to enable them to inform themselves and use it for their own advocacy purposes.

2. TERMS OF REFERENCE

Under the terms of reference given to me, I am required to investigate and present an independent report, based on a sample of at least four communities in the affected areas of the Western

Province who are bound by the Ok Tedi Community Mine Continuation Agreements. The particular terms of reference or research objectives, which this report addresses, are as follows.

First, I am required to, and will present an analysis of the Community Mine Continuation Agreements in respect of their impacts and implications for the livelihood and well being of both men and women within the sample communities.

Secondly, I am required to present an analysis, based on the raw information gathered from field research, whether both men and women within the sample communities were formally and fairly informed as to the workings, requirements, implications and consequences of signing the Community Mine Continuation Agreements.

Thirdly, I am required to assess the methods employed by OTML to inform both men and women in the sample communities about the workings, requirements, implications and consequences of signing the Community Mine Continuation Agreements.

Fourth, I am required to survey and present the perceptions of the men and women within the sample communities as to whether they believe the process employed by OTML informed them of the workings, requirement, implications and consequences of the Community Mine Continuation Agreements.

Fifth and finally, I have been given the liberty to identify and analyze any other relevant factors that have or could impact on the informed consent of the men and women affected by the Community Mine Continuation Agreements.

After I state the methodology I adopted in the field survey and present background material leading up to the Mine Continuation Agreement (MCA) (i.e. the Ninth Supplemental Agreement) and the Community Mine Continuation Agreements (CMCA), I will then individually address the specific terms of references/research objectives as enumerated above.

3. METHODOLOGY

A major component of this review report was the conduct of primary field research by the consultant.

Hence, I established contact with the communities in the Lower Ok Tedi and North Fly River and the Kiunga – Tabubil Highway areas and learnt that there was going to be a trustees meeting for all the eight different trusts or development foundations established under the CMCAs in the following week. So I picked my travel appropriately and got into Kiunga and met and interviewed trustees from four different CMCAs. This was an excellent opportunity because it brought together a great majority of the participants in the CMCA process at one location and the participants who became my interviewees also used the opportunity to compare their notes and their own CMCAs position. A full list of people I interviewed, ranging from trustees to councilors to ordinary village people to company OTML officials, to government officials and women leaders, is given at the back in Attachment I. The questionnaire I used, mostly as a guide to guide the interviews, is Attachment II.

The number of people I interviewed, separated into their respective communities, are presented in the table below:

REGION	CMCA TRUST/AUTHORITY	NUMBER
Lower Ok Tedi	Waitri	2
Kiunga-Tabubil Highway	Tutuwe	10
Middle Fly	Middle Fly Development Foundation	2
South Fly	Kiwaba Development Foundation	5

Mine Area	Mine Area	1
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Apart from these above persons, I also interviewed two other persons from outside of the CMA areas and later spoke with a company (OTML) official who was involved in the MCA and CMCA consultation processes. The questionnaire that I developed and used was not dispatched to the general population but instead I used the questionnaire as a guide to conduct interviews. I decided on this approach because I wanted to personally speak to the people who were actually involved in the MCA and CMCA consultations to maintain consistency and to secure quality and reliability of information. The questionnaire was designed to target those actual participants in the MCA/CMCA process. Hence beginning with the opening question:

“Did you participate in the consultation process with OTML Community Consultation Team and Government Officials leading up to the signing of the Community Mine Continuation Agreements from July 1999 to June 2000?” Followed by the second question requiring these informers to describe in their own words how the consultation team came to their community and how the consultation meetings were conducted.

Consequently, the field research interviews were restricted to those people who actually participated in the consultation and or negotiation meetings with the company (OTML) and government officials. This was necessary given the research objectives particularly to determine the level of informed consent of the communities before they signed the heads of agreements under the MCA facilitating the continuation of the mine followed by the CMCA's which then individually and collectively as communities bind them to the compensation packages as concluded under the respective CMCA's.

Sample Communities and Gender Balance.

Under the research objectives/terms of references, I am required to spread the field survey over at least four communities, two down stream and two up stream. I am also required to interview with women leaders to obtain gender balance in the information and views presented. For purposes of the CMCA, the impact area of the Ok Tedi Mine has been divided up into nine (9) different communities. I have spoken with twenty (20) people from five (5) of these nine communities, namely the Mine area, Tabubil – Kiunga Highway, Lower Ok Tedi Middle Fly and South Fly. Out of the 20 people I personally spoke with and discussed the issues with, two were women leaders. These women leaders actually took part in the consultation process as women's representatives.

Caution

Because of the decision I took to interview actual participants only in the MCA and CMCA negotiation process, this has resulted in the interviewing of a small sample size of the community representatives. This therefore means that the results and inference drawn from the field survey are at best indicative and hence should not be extrapolated to accurately reflect community perceptions of the CMCA process.

4. BACKGROUND ON THE OK TEDI GOLD AND COPPER MINE WASTE MANAGEMENT

The Ok Tedi Mining (OTML) operates the Ok Tedi Copper Mine in the Western Province of Papua New Guinea. An American transnational, Kennecott Copper Corporation, carried out the initial explorations in the late 1960s but withdrew from developing the mine in the mid-1970's, shortly before Papua New Guinea's Independence from Australia. In 1981, amidst soaring gold prices, OTML was created as a truly transnational consortium to operate the mine, with Australia's BHP (30% interest), America's Amoco Minerals Corporation (30%), a German industrial conglomerate (20%) and the Papua New Guinea Government (20%). The operation of OTML is conducted by BHP. In recent times, the ownership of OTML is being restructured to give BHP 52

percent, the Papua New Guinea government 30 percent and Metal Mining Corporation (MMC) 18 percent.¹⁰

Gold production began in 1984 and ceased 1989. Gold is now only obtained as a by-product of copper smelting. Extraction of copper ore began in 1987 and is expected to continue for another 15 years. In 1979 a feasibility study for the Ok Tedi project recommended that a permanent tailings dam should be built for the treatment or disposal of wastes and tailings on the Ok Ma River, and a stable waste dump be constructed in the Ninga and Ok Gilor valleys. Accordingly, construction work began at the Ok Ma dam site, but major landslides in December 1983 and January 1984 forced the company to abandon the construction of a tailings retention dam. Since then OTML has repeatedly argued that because the area is subject to frequent landslides, high rainfall and seismic activity, the storage of tailings and other waste cannot be guaranteed, and therefore the building of a retention dam is too big a risk. Initially the Papua New Guinea government did not accept this argument. Nevertheless, to allow gold production to commence in May 1984, the government gave approval to the use by OTML of an interim tailings dam system. This involved the retention of the sand fraction at the Ok Ninga valley and “the tailings [being] dumped directly into the river system without first being treated”.¹¹

In February 1986, Parliament passed the Mining (Ok Tedi Sixth Supplemental Agreement) Act 1986. This statute legally bound the company to construct and operate a long term copper mine, whereas initially the main partners had preferred to mine only the gold cap, without any commitment to mine the copper until the copper price rose. This Act (and the Agreement it entailed) allowed for the suspension of the requirement for the construction of permanent tailings disposal facilities and stable waste dumps, pending the outcome of a detailed, three year environmental study to be carried out by the company. In the meantime, the company was allowed to continue dumping tailings directly into the Fly River System. A spokesperson for the Wingti Government said:

“The government [did this] after giving much thought to the advantages and disadvantages of the project, [believing] at that time that the overall development advantage to the nation outweighed the environmental impact on the Fly River System as it was not considered permanent”.¹²

After a successful vote of no confidence in the Wingti Government, a new government began in 1989 with Rabbie Namaliu as Prime Minister. In mid- 1989, the new government was pressured by public opinion to re-negotiate the earlier agreement, to force OTML to build a tailings dam and put an immediate stop to the direct discharge of tailings into the Ok Tedi River. Hence in about June 1989, the new Minister for Environment and Conservation, Mr. Jim Yer Waim, was understood to have taken a firm stand against pollution of the Fly River and delta areas. He was reported to have threatened to advise Cabinet to close the mine, unless OTML was prepared to construct tailings treatment facilities to reduce environmental damage to acceptable levels.¹³ In support of their Minister, the Department of Environment and Conservation released a statement to the effect that:

¹⁰ See Recital G of the *Mining (OK Tedi Restated eighth Supplemental Agreement) Act 1995*.

¹¹ *Times of PNG*, 17 May 1989, pp 17, 23. The Ok Tedi gold and copper mine project is governed by a separate Act of Parliament, the *Mining (Ok Tedi Agreement) act 1976*. This Act regulates all relevant matters, including the conduct of the environmental impact assessment and other environmental monitoring processes by way of conducting the submitting to the government periodic Supplemental Studies. The Act also allows for amendments to be made to the Agreement, by enacting a Supplemental Agreement. The Ok Tedi project is exempted from the application of the *Environmental Planning Act* (Ch 370) (see s 3(2)(b)).

¹² *Times of PNG*, 17 May 1989, p. 23.

¹³ *Id.*, at p. 17.

“The pollution of the river system and delta has been compounded as the mine moved from the gold to the copper phase and the amounts of mine tailing and waste rock discharged to the river increased two to three times.”¹⁴

In spite of these developments, the Namaliu government on 28 September 1989 decided not to force OTML to build a permanent tailings dam. Instead, the government opted for the company to be allowed to dispose of the mine waste directly into the river system, with the government and the company then being committed to compensate the people living along the length of the Fly River.¹⁵ After the decision was taken, Mr. Waim the Minister said:

“Everybody [Ministers] were concerned with the effects on the Fly River and everybody was concerned with the welfare of the nation. We decided in favour of the people. It was the best decision any responsible government could take under the circumstances. In anything there has got to be give and take. We risked our environment in favour of the people.”¹⁶

The then Minister for Justice, Mr. Bernard Narokobi, had this to say on the decision:

“After exhaustive briefings and careful questioning by Ministers, the Government has reached the view that the interests of all persons can be best served by allowing the mine to operate without the tailings dam.”¹⁷

The mine dumps about 80,000 tonnes of tailings every day into the Ok Tedi and Fly River systems.¹⁸ Non-governmental organization groups, such as the Australian Conservation Foundation¹⁹ and the German based Starnberg Institute,²⁰ have criticized the mine for polluting the, 1,000 kilometre long Ok Tedi and Fly River systems. Two observers from the Starnberg Institute have claimed:²¹

“The known effects on the environment so far have been very profound. Not only is the water in the two rivers, the lagoons and the Fly River delta under strain, but the sedimentary deposits also impose a burden on the river regions. Copper in solution and other heavy metals can make the water in both rivers toxic to fish and undrinkable for humans ... According to the mine administration, fish stock in the upper reaches of the Ok Tedi have already fallen by 50 – 80 % after only a few years of operation.”

David Hyndman, a respected commentator on the Mountain Ok Tedi people (the affected customary land owners), has made the following assessment:

“Weak environmental protection plans coupled with a long series of ecological disasters starting in 1984 have endangered natural resources sustaining more than 40,000 indigenous peoples of the Ok Tedi and Fly River Basins, and the Ok Tedi project has been an ecological catastrophe...”

¹⁴ *Ibid.*

¹⁵ See *Post Courier*, 24 September 1989, p.1.

¹⁶ *Ibid.*

¹⁷ See *Post Courier*, 16 October 1989..

¹⁸ *Post Courier*, 9 September 1992, at p.1. According to the finding of the Starnberg Institute, however, the mine dumps up to a total of 150,000 tonnes of tailings per day: see Kyere and Castel, “Development and the Environment”. (1991) *Catalyst* (special Issue)

¹⁹ *Post Courier*, 9 September 1992, at p. 1.

²⁰ Kyere and Castel, “Development and the Environment”. (1991) *Catalyst* (Special Issue)

²¹ *Id.*, at p. 33.

Since the mid-1980s, pollution from suspended sediments and heavy metals has been 10,000 times greater than American Environmental Protection Agency standards and has threatened subsistence staples such as fish, crustaceans, turtles and crocodiles and gardens and sago palms growing along the riverbanks and back swamps.”²²

Consequently, BHP, the main owner (then with 52% interest) and operator of the mine, was sued on 5 May 1994 in the Victorian Supreme Court by some 7,500 villagers of the Miripiki Clan who live in the vicinity of the river systems.²³ The villagers were claiming \$2 billion for compensation and \$2 billion as exemplary damages. The writ alleged that BHP and OTML had “negligently and in breach of their duties of care” discharged poisonous material into the Ok Tedi-Fly River systems and had destroyed the villagers’ subsistence way of life. It also alleged that the Papua New Guinea government, a 30 percent shareholder in OTML, had “failed, neglected and refused” to enforce environmental agreements and covenants. On 6 September 1994, more than 1000 new writs were filed in the National court in Port Moresby against BHP and the Papua New Guinea government.²⁴ The Wingti government’s initial response to the lawsuit was to introduce legislation, with retrospective effect, in order to:²⁵

1. Limit the aggregate of claims for damages by land owners;
2. Establish a compensation tribunal with exclusive power to deal with such claims speedily and competently;
3. Compel the resource developers either to establish a fund which would accumulate over time, or to put up a bond from which future claims could be met; and
4. Give the State power to sue developers for environmental or other damage for unlimited amounts.

The Prime Minister at the time, Mr. Wingti, also stated that his government would “seriously consider whether to abolish common law claims by land owners for compensation and instead give landowners a statutory basis”.²⁶

On 25 August 1994 the Supreme Court ruled that the snap resignation and purported re-election as Prime Minister, of Mr. Wingti on 23 September 1993, did not comply with S.142 (3) of the Constitution. As a result, a new Prime Minister had to be re-elected in the next sitting of Parliament, and in the process, the Wingti government was defeated. Consequently, the Wingti government’s proposed legislation did not live to see the light of day.

The new government of Sir Julius Chan with Mr. John Giheno as Minister for Mining and Petroleum brought a new approach and attitude to the issue. Giheno insisted that the government should pursue a compensation agreement with the Ok Tedi and Fly River landowners.²⁷ The Chan government then offered a compensation package of \$113 million to the landowners, and was hoping thereby to persuade the landowners to accept an out of court settlement.²⁸ At first, the

²² D Hyndman, “Zipping Down the Fly River on the OK Tedi Project” in J. Connell and R. Howitt (eds.) *Mining and Indigenous People in Australasia* (Sydney: Sydney University Press) at pp. 78 – 79. For detailed studies on the evolution of the Ok Tedi Mine, see R Jackson, *Ok Tedi: The Pot of Gold* (Port Moresby, Word Publishing 1982); and W Pintz, *Ok Tedi: Evolution of a Third World Mining Project* (London. Mining Journal Books 1984).

²³ *Post courier*, 6 May 1994, at p. 2. See also *Australian Financial Review*, 7 September 1994, at p. 24.

²⁴ *Australian financial Review*, 7 September 1994.

²⁵ R Callick, “PNG Laws to Neutralise \$4bn Claim on Ok Tedi”, *Australian Financial Review*, 18 May 1994.

²⁶ *Ibid.*

²⁷ *Times of PNG*, 23 March 1995, at p.9.

²⁸ *Daily Telegraph Mirror*, 19 April 1995, at p. 44

landowners did not accept the compensation package and continued to maintain their court actions in both the Victorian Supreme Court and the Papua New Guinean National Court. Later, however, they accepted a total settlement package of AUD\$550 million, about six months after the passage of the Mining (Ok Tedi Restated Eighth Supplemental Agreement) Act 1995 and the Compensation (Prohibition of Foreign Legal Proceedings) Act 1995.

In an attempt to broker a settlement, the Chan government first embarked on the Mining (Ok Tedi Eighth Supplemental Agreement) Bill 1995. In response to the widespread criticisms that this Bill attracted, coupled with the prevalent view held by many at that time that the Bill did not comply with certain constitutional requirements, that Bill was subsequently “rearranged”. In the process, the original Bill became two separate but related pieces of legislation: the Mining (Ok Tedi Restated Eight Supplemental Agreement) Act 1995 and the Compensation (Prohibition of Foreign Legal Proceedings) Act 1995. The former came into effect on 2 February 1996, and the latter on 11 April 1996. Soon after these legislation came into effect, the Ok Tedi customary land owners who filed the A\$AUD 4 billion lawsuit accepted the compensation package under the Restated Eight Supplemental Agreement as stated above and dropped all legal proceedings on June 11, 1996.

When OTML and its shareholders offered the compensation package under the Mining (Ok Tedi Restated Eight Supplemental Agreement) Act 1995, it did so without fully accepting responsibility for the environmental damage it was causing to the Ok Tedi River and the entire Fly River system. Rather OTML, though the then Mining Minister, Mr. John Giheno initiated the compensation package as carrot to persuade the landowners who have taken out the lawsuits to accept an out of court settlement. And OTML and its shareholders succeeded. The compensation package under the Mining (Ok Tedi Restated Eight Supplemental Agreement) Act is now administered by Heduru Trust – incidentally Heduru in the Motu language meaning “Helping out”.

Heduru Trust is managed by the Community Relation’s section of OTML out of Kiunga, North Fly.

As indicated earlier, the Mining (Ok Tedi Mine Continuation(Ninth Supplemental) Agreement) Act_2001, in particular with the Community Mine Continuation Agreements (CMCAs) regime it establishes under Section 8, marks a complete turn around in OTML’s position on the issue of environmental damage its operations have caused since its inception. Under Schedule 2 of the various CMCAs, it admits that the mine has caused environmental damage and if the mine continues, there is bound to be more environmental effects downstream, from the Ok Tedi river all the way down to the mouth of the Fly River, I quote:

“IF the Mine continues the following expected effects are likely to occur, but there is a risk that more severe or other adverse environmental effects could arise.

Expected effects
<ul style="list-style-type: none"> • Dirty Water <p>The river water will stay dirty because of suspended sand and silt. This will not change until after the Mine closes. People will have to continue getting their water from side streams, or will have to allow sand and silt to settle from river water before using it for drinking or cooking. This effect will continue to be greatest in the Ok Tedi, and will be significant in the Middle Fly</p>
<ul style="list-style-type: none"> • Sand build-up <p>Sand in the water will settle at places along the main river channel and at the mouth of the channels. It could take 50 years or more for the</p>

<p>river level to go back to what it was like before the Mine started. The river will move around more and make traveling and other activities more difficult. This effect will be greatest in the Lower Ok Tedi and in the Middle Fly above Manda.</p>
<ul style="list-style-type: none"> • Flooding <p>The sand build up will cause more flooding than now. The river water will come over the banks and will flood low-lying areas for longer periods of time than it does not. Some of the sand carried by the floodwater will be deposited on low-lying areas. The maximum area that could be flooded is expected to be 3,800 sq. km. This will happen from the Lower Ok Tedi to Obo. Flooding will continue to affect garden land and walking tracks, until river levels decrease after Mine closure. This could take up to 50 years or more.</p>
<ul style="list-style-type: none"> • Trees losing leaves and dying <p>The flooding will cause trees and other plants, which are, not flood tolerant to lose their leaves and die. The maximum area that could be affected is 1,350 sq. km. This will happen mostly in the Lower Ok Tedi and the Middle Fly. If the trees die they may be replaced naturally by plants, which are better suited to flooding. The forest is expected to recover slowly as the river levels return to normal in the years after Mine closure. The dieback occurs because of flooding and sand deposited from the river.</p>
<ul style="list-style-type: none"> • Fish <p>Fish numbers will continue to go down in the Middle Fly. The fish will be safe to eat. Copper has built up in livers and kidneys of some fish. Very large quantities of livers and kidneys must be eaten every day to cause an effect on human health. When the Mine stops and the river water get cleaner, the fish numbers are expected to slowly come back to normal.</p> <p>Some fish species are no longer being caught in the main channels of the Ok Tedi and the Fly River. These species are still found in side streams or in other rivers in the region. These species are expected to return to the main channels in the years after Mine closure.</p>
<ul style="list-style-type: none"> • Copper <p>The sand that comes from the Mine contains small amounts of copper. The amount of copper will increase if the Mine continues, but is not expected to be harmful to people or fish.</p>
<ul style="list-style-type: none"> • Acid Rock Drainage <p>Some of the sand from the Mine is called pyrite. If it is exposed to air—on sand banks for instance – it can produce some acid. The amounts of acid produced will be small and mixed with very large amounts of water. Any effects are expected to be to a very small area.</p>

They are not expected to be a risk to people or fish.
<ul style="list-style-type: none"> • Sago <p>If sago gardens are flooded for too long the sago may die. The floodwater will not make the sago unsafe to eat. It will be necessary for some villagers in the Lower Ok Tedi and the Middle Fly to travel further from their village to harvest sago.</p>

It is in return for this level of environmental damage and its admittance of liability that CMCA were executed with the affected communities. In essence, the CMCA are compensation packages to compensate the affected communities for environmental damage and loss and nuisance caused to them in their subsistence way of life. It is then fair to say that the CMCA is in effect, a legal device given full legal effect under S.8 of the Act, to lock in and keep all the affected communities away from pursuing individual or separate lawsuits for environmental damage and resultant loss and nuisance. In fact, Clause 12 of the various CMCA – a standard clause for all the CMCA – ensures this by releasing and discharging OTML, its shareholders or associated corporations from any liability.

The Rex Dagi Proceedings

On May 5, 1994, principal plaintiffs Alex Maun and Rex Dagi, representing some 7,500 or so villagers of the Ok Tedi river system commenced proceedings in the Victorian Supreme Court, against OTML and BHP, who was then the majority shareholder and operator of the mines for environmental damage and consequential loss suffered. The total damages sought was \$AUD 2 million in compensation for environmental damage and a further \$AUD 2 million for exemplary damages. On September 6, 1994, more than 1000 new writs were filed in the National Court of Papua New Guinea in related proceedings against BHP and Papua New Guinea Government was then 30% shareholder and regulator.

These proceedings were eventually settled out of court with a total compensation package of AUD\$550 Million under the terms of the Ok Tedi Restated Eight Supplemental Agreement and its enabling legislation the Mining (Ok Tedi Restated Eight Supplemental Agreement) Act 1995. Under clause 5 of the Ok Tedi Restated Eight Supplemental Agreement, all landowners including the plaintiffs in the various court proceedings, who were affected by the environmental impact of the mine, were given six months from the date of the inception of the Agreement, August 4 1995, to opt out of the compensation scheme, by execution in writing executed by a clan leader. Failing that, all customary landowners from the affected area, including those who have taken lawsuits were deemed to have agreed to abide by the compensation scheme under the agreement and the Act. Then on June 11, 1996 the customary landowner plaintiffs dropped all legal proceedings both in Papua New Guinea and Australia and accepted the compensation scheme under the Restated Eight Supplemental Agreement.

Rex Dagi has since returned to the Victorian Supreme Court in 2000 in proceedings No. 5002 of 2000 against OTML and BHP alleging that the OTML has failed to comply with some of the out of court settlement conditions, one of which was for the construction of a alternate tailings disposal facility. These proceedings are continuing. When the Ok Tedi Mine Continuation (Ninth Supplemental) Agreement and the various Community Mine Continuation Agreements were negotiated, this provided a potential source for internal conflict between family members of the affected communities. Before the CMCA were concluded, people were given options to either remain with the Dagi proceedings or opt out and join the CMCA compensation package under the Ninth Supplemental Agreement. Those who opted out of the lawsuit and became part of the CMCA only are entitled to compensation – either general cash compensation or project assistance. The following quote from my own field notes demonstrate the level of conflict:

“There is still tension between those members of the affected communities who have opted out of the law suits and joined the CMCA compensation package process on the one hand, and on the other hand, those members of the same communities who have decided to press ahead with the lawsuit.

The principal plaintiffs in the various lawsuits, which continue both in Victorian Supreme Court (Australia) and those in the Papua New Guinea National Court, are Rex Dagi in the North Fly/Lower Ok Tedi area, and Mr. Gabia Gagarinabu, in the South Fly area.

These tensions were clearly present when I spoke with people from these respective areas. For example in the Lower Ok Tedi River Village of Yogi, Honourable Elizabeth Matit, an elected Ward Member in the Kiunga Urban Local Level Government, and a women leader in the area, said that she was previously in the lawsuit with Rex Dagi but when the CMCA compensation package was put to her people and herself, she decided to opt out of the lawsuit and opt into the CMCA process because she formed the view that CMCA compensation packages presented real opportunities for herself and her people. Some of her relatives have however decided to stay on with the Rex Dagi led lawsuit. The general view held by these people who have decided to pursue the lawsuit is that OTML and BHP Biliton and their partners should be made to account fully for the level of environmental damage that they now admitted to have caused. The compensation packages concluded under the CMCA do not represent a true value in terms of environmental damage and loss suffered by the people. This division between these two groups of people, generally identified as CMCA group on the one hand, and lawsuit group on the other, has in fact divided families and village communities. The other representatives whom I spoke with, from the Middle Fly and South Fly, also confirm this.

In the Middle Fly, Rex Sale, a community representative to the CMCA negotiation process and now a trustee of the Middle Fly Development Foundation, also mentioned that about 3000 of his people have decided to continue on with the lawsuit. Since they are not covered in the CMCA compensation package, they do not receive cash compensation payments whereas the others who have agreed through their village communities to be party to the CMCA do receive cash compensation payment. This has caused some tensions in these communities. In the South Fly region, David Garibah, Vice Chairman of the Kiwaba Development Trust, and Abio Udu, a trustee of Kiwaba Development Trust, stated that three Kiwai villages of Sepe, Auti, and U’uwo are not party to the CMCA compensation package and there is tension between these villages and the other Kiwai villages who are party to the CMCA package. Gabia Gagarimabu is from Sepe Village it is clear that OTML and government officials who were tasked to secure the CMCA packages found it difficult to penetrate these villages”.

5. REVIEW AND ANALYSIS OF THE MINE CONTINUATION AGREEMENT REGIME

This is the first research objective I am required to address. I am under this objective, required to first present an overview of the Mine Continuation Agreement regime and then analyse the specific provisions of the CMCA's and consider their impact and implications for the livelihood and well-being of both men and women, particularly within the sample communities of this research. Therefore, I will first present an overview of the MCA/CMCA itself, secondly, will then analyse specific provisions of the CMCA, the Ninth Supplemental Agreement and their enabling legislation. That will then be followed by consideration of the impacts and implications for the communities.

Over View and Mechanics of the MCA/CMCA

The MCA is actually the Ok Tedi Mine Continuation (Ninth Supplemental) Agreement which is the first Schedule to the Mining (Ok Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001. The CMCA's are established under the Ninth Supplemental Agreement and the Act as a mechanism to organize customary landowners in affected communities and package compensation for these affected communities based on the magnitude of the environmental damage in their respective communities. The CMCA's are the legal instruments through which the affected communities and OTML are bound by; with specified duties and responsibilities. On the part of the people under the CMCA, they undertake not to pursue separate compensation lawsuit claims outside of the CMCA and on the part of OTML, it undertakes to pay the agreed compensation payment specifically specified under the respective CMCA's.

Under the Ninth Supplemental Agreement and the Act, a total of six separate CMCA's were executed with the affected communities, from the mine area itself; on the Ok Tedi River; the Tabubil – Kiunga Highway through which the copper slurry is transmitted from the mine to Kiunga; the North Fly River area, all the way down to South Fly. For purposes of the CMCA, these communities have been divided into the following six groups:

	CMCA AREA	REGION	VILLAGES
1.	Mine Area	Ok Tedi Mine	Atemkit Kavarabip Finalbin Wangbia Migalsimbip
2.	North Ok Tedi	North Fly	Ok Tidetau Boliwogam Nioksikwi Derongo Kumguit Ankit Konkit Walawam Wogam Kolebon Wombon Digam Kawentigin Boungkim Haidowogam Wurikanatko Bumbin Ningerum Tamaro
3.	Lower Ok Tedi	North Fly	Atkambia Ieran

			Dombre Ambaga Kawok Iogi Komopkin Bombubun Senemrae Kwiape Konkonda Bige Miamre Sarae Demasuke Birimkamba Pastmambin Kungim
4.	Highway	North Fly	Sisimakam Kwilokoai Tapko Hosonai Hiorinkia Awin Ramaro Hosokumgu Pampenai Wangenai Iankenai Mimigire Kasrenai Matkomnai Gresohore Ipoknai Dande (1) Dande (2) Hoponai Tope Menumsore Briompenai Rudmesuk Rarengre Miasomnai Gre Tiomnai Gii Grengas Timindemesuk
5.	Middle Fly	Middle Fly	Mepu Uluwas Moian Erecta Kukujaba Karengu Menbok Kwen Mipan Manda Bosset

			Wangawanga Aiambak Komovai Kaviananga Obo Owa Levame Kasa
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6.	South Fly – divided into 4 separate sub-regions with the respective villages as follows:			
	SUKI	NORTH BANK	SOUTH BANK	KIWAI ISLAND
	Aewe	Aberagerema	Daware	Agobaro
	Eniyawa (Daru	Aroto	Katatai	Abinio
	Gwaku	Doumori	Kadawa	Dameratamu
	Kautru (Aewe	Kabatari	Koabu	Gesowa
	No.3)	(Sagero)	Baramura	Iasa
	Kiru	Kaiapo	Madame	Ipisia
	Puka Duka No. 1	Kea	Mutam	Kubira
	Puka Duka No. 2	Kename	Parama	Oromosapu
	Riti (Aewe No.2)	Kededibi	Severemabu	Sagopari
	Sapuka	Maduduwo	Sui	Saguwame
	Serki	Maipani	Tirioi No.1	Samari
	Sialowa	Paddaeya No.1	(Madiri)	Wapura
	Dewara	Padaeya No. 2	Tirioi No. 2	Wapi
	Suame	Pagona No.1	Wederehiamo	
	Baidowa	Pagona No.2/Gai	Aduru (Somogi)	
	Dede (Wasua)	Sagero No.1	Sepe/Auti	
	Lewada	Tire'ere	U'uwo	
		Urio		
		Waliyama		
		Wariobodoro		
		Domera		

From these six CMCA's, nine separate trusts, have been created, with at least a trustee from each of these villages to represent them. The various trusts, under each of their respective CMCA's are as follows:

CMCA	TRUST	TOTAL COMPENSATION PACKAGE
North Ok Tedi	Nupmo	Information not available to researcher.
Lower Ok Tedi	Waitri	Information not available to researcher. However previously in 1996, K40 million compensation package as out of court settlement was agreed to be paid under the Alice River Development Trust as part of the Eight Supplemental Agreement.
Highway	Tutuwe	K15 million compensation package with direct cash compensation component

		and a projects component.
Middle Fly	Middle Fly Development Foundation	K57.6 million total compensation package divided into 3 components: 1. Future Generations Trust; 2. Development (Projects) Fund; and Cash compensation (payout) handled and paid out by OTML Community relations officials and not the trust created under the CMCA.
South Fly	Suki Flygogo Development Trust (Suki and Gogodala)	Information not available to researcher.
	Manawete Development Trust (Northbank of the Fly – Balimo side)	Information not available to researcher.
	Dudi Development Trust (Southbank of the Fly River).	Information not available to researcher.
	Kiwaba Development Trust (Kiwai and Wabada group of islands)	K9.5 million compensation package divided into 3 components: 3 components: Development (Project) Fund; Investment; Education subsidy (sponsorship). There is no direct cash payout component.

You will note from this table (immediately above) that the Middle Fly CMCA has three separate trusts for purposes of implementation of the total compensation package under their CMCA.

As indicated earlier, at least one trustee is appointed by a village to represent them on the trust created under their respective CMCA's. The trustees meet with the administrator of the trusts in Kiunga (OTML Community Affairs Brown House 2) on a quarterly basis to take decisions on the administration of the trusts. Under the CMCA process, a village development committee, comprising elders of a village, have been set up for consultation purposes for immediately after trust meetings in Kiunga, all individual representative trustees are required to go back to their village community and do patrols, possibly with OTML community relations officials, if not by themselves, and then inform their village community of the decisions taken at the last trust meeting. Because of the trustees extensive involvement with OTML community relations officials, some observers in Kiunga have commented that the trustees are now perceived by their communities as officials of the company rather than their own.

Review and Analysis of the MCA/CMCA and the Legislation

As briefly introduced in the introduction, the Ok Tedi Mine Continuation (Ninth Supplemental) Agreement (MCA) under which the six separate CMCA's as reviewed above have been established are all given statutory basis under the Mining (Ok Tedi Mine Continuation (Ninth Supplemental)

Agreement) Act 2001 – where the MCA is First Schedule to the Act and the CMCA's are Second Schedule to the Act.

Section 4 sub-sections (1) and (2) gives full legal effect to the MCA and the CMCA's and declares that these agreements apply irrespective of any law to the contrary and then declare at Section 4 (4) of the Act:

“The Community Mine Continuation Agreements represent the final and binding agreement between the parties thereto on compensation and benefits payable to such of them as are affected by the Project”.

Section 4 (b) of the Act then oust the application of the Fairness of Transaction Act 1993 which has now come into effect on September 25, 1998, from having any effect or implication on the MCA or the CMCA's.

Section 8 of the Mining (Ok Tedi Mine Continuation (Ninth Supplemental) Agreement) Act is particularly interesting and I submit, is of concern because the effect of this provision appears to be that so long as a community leader holds him or herself out as one and a representative of the community irrespective of the actual level of consensus in the community, by signing the agreements, that person legally binds all. I now quote that provision in full for your own assessment:

“8. EXECUTION OF COMMUNITY MINE CONTINUATION AGREEMENTS AND OTHER ACTS BINDING.

- (1) The signature or other execution of a Community Mine Continuation Agreement by a person representing or purporting to represent a Community or clan, or that person's delegate, binds all of the members of that Community or clan to that Community Mine Continuation Agreement notwithstanding—
 - (a) that there is no express authority for that person to sign or execute the Community Mine Continuation Agreement on behalf of the members of the Community or clan concerned; or
 - (b) that not all representatives of the relevant Community or clan have signed or otherwise executed the Community Mine Continuation Agreement; or
 - (c) that not all members of the Community are parties to the Community Mine Continuation Agreement; or
 - (d) any requirement of the Underlying Law.
- (2) The acts and deeds of a person described in Subsection (1) in respect of any matter referred to in the relevant Community Mine Continuation Agreement bind each person on behalf of whom that person purports to be acting, and where a person purports to be acting on behalf of the whole of that person's acts and deeds bind each existing and future member of that person's community or clan, including, without limitation, children and persons who are subsequently born into, or who subsequently join, that Community or clan.

This is further followed through in clauses 9 – 13 of all the six CMCA's – as commitments by the communities, particularly under clause 11.2

“that the persons signing this Agreement for and on behalf of each member of the communities have the power and authority to do so and that this Agreement will be valid and binding on each member of the community”.

This is then followed through with a specific full indemnity clause under clause 12 where the communities participating under the six CMCA agreements fully release and discharge OTML, BHP, the Company’s shareholders and their associated Corporations, Directors, Officers and agents from “all and any demands and claims arising directly or indirectly from the operation of the Mine or any associated works”.

Under clause 13 of the CMCA, the Communities as parties to the six CMCA’s undertake to:

- “13.1 take such steps as are necessary to ensure that on or before 7 January 2002 the Communities, whether by the authorized representatives or otherwise, execute and deliver opt out notices in the Supreme Court proceedings; and
- 13.2 ...release and discharge the company (OTML) and BHP from each and every claim made in the Supreme Court proceedings and the Dagi Proceeding”.

As of Monday, March 3, 2003, I confirm that not all the members of the affected communities in the villages covered by the six CMCA’s have opted out and joined the CMCA. Honourable Elizabeth Matit and Honourable Tina Edwards from Iogi and Atkambia villages respectively, lower Ok Tedi, confirmed that their Communities were divided into two groups: the lawsuit camp and the CMCA camp and the situation remains. Rex Sale from Kivanga/Obo village, Middle Fly stated that of the 10,000 people he represents as a trustee of the Middle Fly Development Foundation, 7,000 have signed up on the CMCA but 3,000 have not and they are with the Rex Dagi led lawsuit. In the South Fly Area, particularly the villages of Sepe, Auti and U’uwo have not joined the CMCA process but have decided to pursue legal proceedings with Gabia Gagarimabu as their leader in the Supreme Court proceedings.

Clause 19 of the respective CMCA’s (all CMCA’s are standard in context but only differ in the Schedules which sets out the different set of compensation packages) address the effect of the payment of compensation under the MCA and CMCA regimes and all previous compensation regimes. It is a significant provision. Hence, I quote the relevant parts:

“... the payments to be made by the Company (OTML) pursuant to this agreement are and shall be in full compensation for all loss and damage contemplated by the Environmental Predictions suffered or to be suffered by the Communities in respect of disturbance to the environment in the Lower Ok Tedi area of their use or enjoyment of the environment, including, where applicable and without limitation to the generality of the foregoing,

- (a) being deprived of the possession or use of the natural surface of the land area;
- (b) damage to or contamination of the natural surface of the land;
- (c) severance of the land or any part of it from other land owned or occupied by the Communities;
- (d) any loss or restriction of a right of way, easement or other right;
- (e) any loss or damage to improvements;

- (f) in the case of land under cultivation, loss of earnings;
- (g) disruption of agricultural activities;
- (h) social disruption;
- (i) garden damage and loss of economic trees;
- (j) loss or damage to any flora or fauna, on the land or in the water; and
- (k) loss or use or contamination of water.

The net effect of clauses 12, 13 and 19 of the CMCA is for the people to relinquish and extinguish all legal rights which the people in the affected communities would have had to legal recourse in any court of law for any loss or damages caused by the environmental effects of the operations of the mine. Section 8(2) of the Mining (Ok Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001 further states that the acts and deeds of current community representatives in executing the CMCA “bind each person on behalf of whom that person purports to be acting, and where a person purports to be acting on behalf of the whole of that person’s community or clan, that person’s acts and deeds bind each existing and future member of that person’s community or clan, including without limitation, children and persons who are subsequently born into, or who subsequently join that community or clan”. (Emphasis added). From the emphasised lines of Section 8 (2), we find a situation where the current generation of community leaders have bound the future generations without having any iota of information available, either to them or the company, of what the future holds for the children and those yet to be born. In fact for as long as this provision remains, generations of people in the affected communities will remain bound by the terms of the CMCA and its enabling legislation. In this context, it must also be pointed out too that Section 4 (6) of the Act bars the application of the Fairness of Transactions Act 1993, hence, shielding the CMCA from legal challenge by say future generations.

Although Section 5 of the Mining (OK Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001 does not concern customary law holder and those in the affected communities covered in the various CMCA, it is interesting to note that it provides “an absolute bar and defence” to BHP Billiton and its related companies in respect of any claim for environmental damage relating to or arising out of the operation of mine. In this regard, this is what Section 5(1) of the Act says:

“...neither the State nor any Government Agency may take, pursue or in any way support Proceedings against a BHP Billiton Party in respect of any Environmental Claim relating to the operation of the Project”.

This may mean that the Governor of the Western Province or the Provincial Government itself cannot support any proceedings, which the people living in the affected areas may wish to bring. Section 5 of the Act then offers the absolute protection thus: “This Section may be pleaded by a BHP Billiton Party as an absolute bar and defence to any Proceedings taken by the State or a Government Agency in breach of its terms”.

As stated above, all the communities within the six CMCA areas are required under Clause 13 of their respective CMCA to release and discharge OTML, BHP and its current and past shareholders from all claims from environmental damage outside of the CMCA. All the communities in the affected areas have been obligated under clause 13.1 to execute and deliver opt out notices from the existing court proceedings led by Rex Dagi and Gabia Gagarimabu on or before January 7, 2002. As stated earlier, this has not happened and the law suits are current and on foot and some communities of the CMCA areas are divided with some sections of the communities steadfast and active with their support and participation in the lawsuits.

If the courts, either the Victorian Supreme Court or the Papua New Guinea National Court finds for the plaintiffs in any of these proceedings and make orders either for the construction of a tailings storage facility or damages for environmental damages, then by the operation of clauses 15 and 16 of the CMCA's, OTML will have no obligation to continue to make the compensation payments under the CMCA's. Clause 15.2 in particular says that if the court orders:

“the payment of damages by [OTML] or BHP to the Communities or any member of them, then [the clauses on the payment of various compensation packages and cash payments under clauses 17 and 18] from the date of any judgment or award of damages and all payments made pursuant to clause 17 and 18 before that date will be taken into account and will be set off against those damages”.

In effect, Clauses 15 and 16 allows OTML and its shareholders to refuse to honour the compensation package schemes set up under the six CMCA's if the court finds in favour of Rex Dagi and his group or Gabia Gagarimabu and his lot. Now the irony of this is that Rex Dagi and Gabia Gagarimabu and their followers are not or have never been, part of the CMCA process. They have taken a considered position not be members and party to the duly executed CMCA's. Therefore, why should their victory in court, affect a contract/agreement to which they are not parties to? Approaching this same concern but from the standpoint of the participants to the CMCA process and now agreement, why should the victory in court of the people who are not parties to the CMCA vitiate the rights and indeed benefits, contractually agreed in the CMCA's between OTML and the communities constituted in the six CMCA's? During the consultation meetings leading up to the execution of the CMCA's, were the people made aware of the effect and consequences of clauses 15 and 16 of the CMCA's? There is evidence from the field survey to suggest that the substantive texts of the CMCA's were neither discussed nor negotiated at these consultation meetings. Hence, there is a strong likelihood that clauses 15 and 16 of the CMCA's were never discussed. It is clearly not fair on the part of the participants to the CMCA's to subject their contractually concluded compensation packages to hinge on the outcome of court proceedings which they are not parties to at all.

Impacts and Implications of the MCA/CMCA for the Communities

The foreseeable impacts and implications which the continued operation of the mine poses for the people are clearly set out under Schedule 2 of the CMCA's under the heading “Environmental Predictions”. With the continuation of the mine, more environmental effect and damage are predicted to occur such as:

- 1) dirty drinking water from the river systems – Ok Tedi river and down to Middle Fly river where water will be unfit for drinking or cooking and therefore people will have to source and access water for domestic consumption from side stream;
- 2) siltation of the river systems by sand build ups and it is predicated that it may take up to 50 years before the river levels go back to its original state. The river systems are likely to change their course thereby making traveling and other activities difficult for the river people. It is predicted that this effect will be greatest in the lower Ok Tedi and in the Middle Fly river area;
- 3) flooding – due to the sand build up, there is likely to be more flooding and low-lying areas of the lower Ok Tedi and Middle Fly are likely to be flooded for longer periods of time thereby affecting gardening land and walking tracks;
- 4) flooding will then cause trees and plants to die thereby destroying forest land. Infact, this is already evident from the Lower Ok Tedi river all the way down the Fly river. However, note that the company (OTML) has in its predictions restricted the affected area to a maximum of 1,350 sq km concentrated in the lower Ok Tedi to Middle Fly;

- 5) dwindling fish catches with some fish species totally disappearing. OTML has predicted that when the mine eventually ceases operation and the river gets cleaner, fish numbers and stocks are likely to return to the main Ok Tedi and Fly River systems;
- 6) there will be traces of copper in the river systems. The company (OTML) however predicts that it is not expected to be harmful to people or fish. It is however essential that the copper trace level must be monitored closely to ensure safety of fish life and people in the affected areas;
- 7) there is bound to be acid rock drainage run off from pyrite – sand from the mine – entering the river system. Again this must be closely monitored;
- 8) there is bound to be loss of sago palm trees as a result of flooding particularly in the Lower Ok Tedi and Middle Fly areas; and
- 9) due to flood, most economic tree (ie. trees and bush material used by the people for making canoes and building houses) are like to die.

Particularly for the river people who extensively use the river systems and depend on the resources found in the river systems, and as noted above, the impacts which the environmental damage from the mine have caused and will further cause are no doubt severe. It is for this reason that that people of Lower Ok Tedi and Middle Fly were insisting on higher levels of compensation packages. Rex Sale, a trustee of the Middle Fly Development Foundation and one of the signatories to the CMCA between Middle Fly communities and OTML stated that his people were very concerned of the serious environmental damage and the implications for the livelihood of his people and they wanted to secure the best possible deal for their people. This led to them engaging the services of Posman Kua Aisi Lawyers to represent them and help them negotiate and secure the best possible deal. He mentioned that his and their lawyers efforts to enter into meaningful negotiations with OTML were always met with the response that the CMCA's were pro forma agreements whose specific clauses were not subject to negotiations. That the specific clauses, except for the schedules setting out the compensation packages, have been settled by OTML and the Government therefore were not subject to negotiations. The compensation packages were the only parts of the CMCA which were subject to negotiations.

The CMCA's are in essence compensation packages which OTML has negotiated with the communities and have now agreed to pay. Because of the operations of Section 8 (2) of the Mining (Ok Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001 as reviewed above, the people of this generation and of the next are bound by the compensation package under the CMCA.

It is fair to say that the CMCA is in essence a legal means to contain and control through negotiations, any blow out in the magnitude of compensation claims pursued through the courts. From this standpoint, the CMCA is more advantageous to OTML and its Shareholders because it is able to control and minimize its extent of liability for environmental damage to levels where it knows it can afford. This of course may not necessarily represent a true, just and equitable value or reflect a fair and proper extent of damage and the consequential loss suffered by the affected communities as a direct or indirect consequence of the environmental damage which OTML has now openly accepted liability.

6. INVOLVEMENT OF BOTH MEN AND WOMEN OF THE SAMPLE COMMUNITIES IN THE CMCA CONSULTATION PROCESS.

This is the second term of reference I am required to address. Under this term of reference, I am required to present an analysis, based on field research, as to whether both men and women within

the sample communities were formally and fairly informed as to the workings, requirements, implications and consequences of signing the CMCAs.

In the introduction, I have quoted Dr. Roger Higgins, the then Managing Director of OTML and chief architect of the CMCA compensation packages where he stated in the PNG Resources magazine (Issue Three) at pages 42 - 43 in particular that OTML and the National Government have consulted more than 150 communities and that these consultations took place over a period of more than two years commencing in 1999 to secure the continuation of the mine under the Ok Tedi Mine Continuation (Ninth Supplemental) Agreement and its legislative framework.

In fact, Schedule 1 of the various CMCAs set out the different level of consultations, which OTML and the Government officials held with the affected communities, leading up to the conclusion of the MCA and the CMCAs. For example for the Middle Fly communities, Schedule 1 of their CMCA states as follows:

SCHEDULE 1 CONSULTATIONS

The first awareness patrols were conducted by Company officers in July 1999 after the release of preliminary findings of the Mine Waste Management Project in June 1999.

Generators and video players were taken to show the video “Ting Ting Nau Long Bihain Taim”. Information about the Environmental Predictions was explained and discussed.

In August 1999 a “round table” meeting was held in Tabubil attended by leaders of the Communities to discuss all issues concerning the future of the Mine.

Discussions, briefing sessions and meetings continued until the Consultations were formalized with a letter from the Minister for Mining Sir Michael Somare to all Presidents, councilors and village Leaders in Western Province, dated 15 February 2000. A copy is annexure B.

In March 2000 the Minister’s letter was distributed by Government officers, who visited the Communities for that purpose. Awareness patrols were conducted to a total of 80 villages affected by the Mine by four groups, comprising officers of the Department of Mining, Department of Finance and Treasury, Department of Attorney General, Department of Planning, Department of Provincial Affairs, the Office of the Environment and OTML.

In April 2000 meetings were held in Moian and Bosset with representatives of the Communities to determine a process for electing representatives.

In June 2000 at a meeting in Kaviananga, all of the members of the 17 villages elected a “40-man committee” to discuss the continuation of the Mine, and empowered the committee to delegate a “9-man working committee”, representing the three zones of the Middle Fly. Subsequently, the 9-man committee agreed a program for further discussions with the company and the State.

The “Government – Ok Tedi Community Consultation Team” reported to Sir Michael Somare in June 2000.

In July 2000 Sir Michael Somare visited the Western Province and attended public meetings in Bosset and Aiambak to discuss the future of the Mine with the

Communities. Deputy Governor Fidelis Fili and Acting Administrator David Ipassi both accompanied the Minister and participated in the meetings.

Succeeding Ministers for Mining, Sir John Kaputin and Mr. Michael Laimo, also visited the Western Province and held public meetings about the future of the Mine attended by representatives of the Communities. Deputy Governor Fidelis Fili also attended.

The Department of Mining produced for wide distribution a booklet called "Ok Tedi the Future", discussing in Tok pisin and English the environmental and social issues relevant to the Mine's future.

PEACE Foundation Melanesia was engaged by OTML to conduct people skills and negotiation-training courses to assist the Middle Fly villages reach conclusions amongst themselves about the course they wished to follow in discussions with OTML.

Wherever possible, independent observers attended the meetings with the Communities and OTML, and Government officers chaired the meetings.

Representatives of the 17 villages signed a Heads of Agreement with OTML, the Provincial Government and the State on or about 29 September 2000.

In January 2001 the discussions leading to this Agreement began. The 9-man working group and the 40-man committee have reported to the Communities throughout, and the Communities have authorized the execution of this Agreement.

Reactions from Interviews from the Sample Communities.

The majority of the people I interviewed from the sample communities were critical of the level of consultations between their respective communities and the OTML and Government officials. For example, when I asked, as to the length of time which the various consultation meetings took, all my interviewees said, "up to two hours at the most and the officials then moved onto the next village either in their waiting helicopter, speedboat or vehicle". They were all critical that under these circumstances, there was no opportunity for proper dialogue between the parties to properly discuss issues of concern..

Particularly concerning the community consultations in the Middle Fly, my interviewee gave me a detailed written account of how the consultation went. I quote from parts of his written brief to me:

- “1. Letter of instruction for the consultations with the communities, dated February 15, 2000 from then Mining Minister, Right Honourable Sir Michael Somare – letter did not reach bulk of the people. Even then, for those communities, which it reached, the letter was not clearly explained to the people in language other than the English language it was written in.
2. Sir Michael Somare's visit following the letter was not given wide publicity. Consequently not many people were aware of his visit. Sir Michael Somare's visit was only to major centers, for example, Tabubil, Kiunga, Aiambak etc. and few landowner representatives were handpicked to attend. Generally, there were poor logistical arrangements.
3. Consultation were not carried out in all Middle Fly Villages. There were only three meetings lasting for 2 – 3 hours only were held as follows:

- Upper Middle Fly meeting was held in Moen village – at this first meeting the people were told to go back to their villages and select 2 representatives each;
- Central and Lower Middle Fly – held at Bosset; and
- At Kavianga – all representatives from Upper, Central and Lower Middle Fly meet to confirm two representatives each.

Consultation should have started 2 – 3 years before year 2000.

4. Negotiations skills training course conducted by Peace Foundation Melanesia in the Middle Fly was only for three (3) days. The three (3) days training was insufficient to equip the people.
5. Heads of Agreement Signing for the continuation of the mine was signed at the Tabubil Golf Club without sufficient time being given to the people to go through the agreement.
6. Negotiations of the CMCA – settled at K57.6 million. We feel that this is a cheap deal – we should have been given more to compensate us for the environmental damage and its impact on our livelihood.
7. Signing of the CMCA at Bosset – draft agreement was drawn up by OTML/BHP Lawyers and was given to us and our lawyers. Through our Lawyers we proposed changes to certain Clauses but those were refused. Any proposed changes were refused and the explanation given was that OTML and PNG Government had drawn up the proforma contract and that has been agreed to by the Government. We were forced in a way to sign the Agreement.

In Middle Fly only Seven (7) of us were able to view and discuss the draft CMCA with our lawyers. Other regions never viewed their CMCA – they only signed the paper provided for signature to be attached to the Agreement. We were also told that time was pressing as the Ninth Supplemental Agreement and the legislation must get through parliament in the November sitting which was the last sitting for the year.

The above comments are generally supported by majority of the other 19 people I interviewed.

Questions from the Questionnaire.

The second question I asked from the questionnaire I prepared and invited responses, concerned the way in which the consultation team conducted meetings in their communities. All the people whom I interviewed said that the consultation team would arrive in their communities and they all gathered in one large group as a community and were then spoken to. Women were not separately talked to or consulted. Both men and women and children were talked to together in one gathering.

The third question I asked was whether the interviewee could recall some of the topics discussed and whether they understood the issues. Except for 2, all said they did.

The fourth question I asked was whether they have been shown and taken through a draft agreement before it's signing. All said No. Clearly, therefore it is safe to conclude that neither the draft heads of agreement (MCA) nor the CMCA and their contents were openly discussed and explained to the communities within the sample areas before they signed on them. Hence, these men and women in these sample communities were not formally and fairly informed as to the

workings, requirements, implications and consequences of signing the CMCA – particularly the effects of and operations of Section 8 of the Mining (Ok Tedi Mine Continuation (Ninth Supplemental) Agreement Act 2001 which I have extensively discussed under the previous term of reference. If the people understood that their signatures now would bind the next generation (children and those unborn) would they have proceeded to sign on the dotted lines?

7. METHODS USED BY OTML TO INFORM BOTH MEN AND WOMEN OF THE WORKINGS, REQUIREMENTS, IMPLICATIONS AND CONSEQUENCES OF THE CMCA.

The methods of consultation employed by OTML to engage and consult with the affected communities for all the six CMCA are specified under Schedule 1 of their respective CMCA. For the Middle Fly CMCA, I have quoted that above. Nevertheless, in brief, the OTML sent out various patrol teams accompanied by relevant government officials to the affected communities. It is also noted from Schedule 1 of the CMCA that:

- The consultation teams also brought with them generators and video players to show the video “Ting Ting Nau Long Bihain Taim” and used that medium to disseminate information about Environmental Predictions;
- A Department of Mining produced booklet, entitled: “Ok Tedi the Future” which discuss in Tok pisin and English the environmental and social issues relevant to the Mine and their future was also distributed by the consultation patrol teams;
- PEACE Foundation Melanesia a Non Government Organisation (NGO) involved in running negotiations skills training courses was engaged by OTML and it ran negotiation skills training courses to assist the communities to form and reach their own conclusions and take decisions for themselves;
- There were of course series of round table meetings with OTML and Government officials and village representatives or committees; and
- The letter dated February 15, 2000, from the then Mining Minister Right Honourable Sir Michael Somare urging the communities to enter into consultations with OTML and Government officials to negotiate the MCA and the CMCA, is in fact said to have formally initiated the community consultation process. In fact a OTML Community Affairs Official mentioned to me that they mounted extensive community patrols, far and wide and into as many villages as possible, by all available means of transport, to “distribute” this letter.

Question 10 of my questionnaire asked the interviewees of the sample communities if they have read the booklet: “Ok Tedi the Future”, produced by the Mining Department and distributed by the Consultation teams. Except for one interviewee from the South Fly area who said he has a copy and has read and understood it, all the other interviewees said they have never seen a copy and asked me for copies. I told them that I have not seen it therefore I am of no help to them.

It is clear that majority of the people from the sample communities have not seen a copy of this important source of information material.

Question 11 of my questionnaire asked the interviewees of the sample communities concerning the video: “Ting Ting Nau Long Bihain Taim” – whether they have seen it. Except for one interviewee from a Kiunga – Tabubil Highway village, who said yes, every one else said they have not seen it; neither have they heard of it. Clearly, therefore and particularly so in these sample communities, the majority of the communities did not get to see the video

Concerning the negotiations skills training course conducted by PEACE Foundation Melanesia, five of the interviewees said that they attended the course because they were representatives of their people and that they found the course to be very interesting. Their concern however was that

only if the course was for a longer period – say 2 weeks – rather than 3 days – and in good time well before the negotiations commenced, they would have applied themselves well. But given the situation that the agreements they signed were not open for negotiations as they were Pro forma Agreements, most of these representatives who participated in the course felt that they did not have the opportunity to put into practice what they learnt.

8. COMMUNITY PERCEPTIONS ON WHETHER THE PROCESS ADOPTED BY OTML INFORMED THEM ADEQUATELY.

In here I present the perceptions of the men and women within the sample communities surveyed as to whether they believe the process employed by OTML informed them of the workings, requirements, implications and consequences of signing on the CMCA's.

Question 6 of my prepared questionnaire was aimed at soliciting this information. The question was framed in a general and impartial manner so as to allow for a fair and a personal response. I asked thus:

“Are you happy with the way the consultation team (OTML & Government officials) were taking to you about?” The following are samples of responses:

Person 1 answered:

“Generally yes. Except that we should have been given ample notice and more time to talk things out with them”.

Person 2 responded:

“No comments”.

Person 3 said:

“The time was too short. They usually come to tell us of what they wanted to do and wanted us to agree with them. We did not propose to them anything.

For example, the initial heads of agreement was first signed – after that was signed, that we wanted the mine to continue and that we opted out of the lawsuit – then the actual CMCA's were then discussed in subsequent –5- such meetings”.

Person 4 said:

“No. They just tell us what they want to tell us and they leave. They never seriously listen to us”.

Person 5 just replied:

“Yes”.

Person 6 again said:

“Yes”.

Person 7 said:

“No. I wasn't because they were talking about their business development and not me and my peoples' development”.

Person 8 said:

“No”. because the meetings were awareness meetings. Not proper consultations”.

Person 9 said:

“Generally yes. Except for one failure that the company did, which we were upset – it is that they did not allow us to have any input into the agreement. They should have allowed us time to see and discuss the agreement and sign it. We, it appears blindly, through our chairman, signed the agreement. We all signed”.

Person 10 said:

“Consultation was okay. We are happy”.

The above stated perceptions, taken from 10 persons, including the two females, speak for themselves and need very little analysis except for the following obvious comments that:

- 3 out of 10 said they were happy;
- 3 out of 10 said no – they were not happy;
- 1 offered no comment; and
- 3 out of 10 were generally happy with the consultations but complained, either that there was not enough time given or that their views were not heard and taken into consideration.

Question 14, the last question of the questionnaire was also asked to gauge individual perceptions from the interviewee’s. The question was “....please state your general comments about the way in which the OTML and Government officials came to your village or place and talked to you about the mine continuation agreements”. When this question was put, a respondent from the South Fly area responded as follows:

“The meetings were very brief. They never took us thru any draft agreements they had. We were usually told of what they planned to do and they got us to either agree or disagree with them”.

Another respondent from the South Fly area responded in very similar terms, thus:

“They came and usually told us of what they intended to do – and we usually agreed. But at least this is better than previously where we were never heard”.

Majority of the respondents from the Middle-Fly area were happy with level of consultation. Their only concern was that the meetings were usually too short and that they usually provided the listening ears. There were no negotiations but consultations only.

The respondents from the lower Ok Tedi were generally happy and expressed much optimism that CMCA does represent a real opportunity for tangible development in their area.

The respondents from the Kiunga – Tabubil Highway areas were generally happy with the CMCA process but expressed concern that it has been two years gone now and that there has been no progress made in implementation of projects.

The outcomes of interviews from the sample communities indicate the following:

1. That there was awareness and consultations with the communities but these meetings were too short resulting in no meaningful two-way dialogue and negotiations.
2. The process and methods used by OTML to engage with the communities were more suited for awareness rather than negotiations. This observation is based on the consistent

comments by a majority of the interviewees who stated that the meetings which they had with OTML and government officials were used by the officials to inform the communities or were forums at which the officials were seeking endorsements of their positions or even decisions. These meetings were certainly not forums at which a negotiated outcome was sought.

3. The communities, nevertheless, appreciated the real efforts made by OTML and government officials to at least inform them of what they were doing. This level of consultation was never held before.

From the above responses, it is safe to infer that the methods used by OTML to inform them, were generally considered adequate for awareness purposes only. These methods were however not considered to be adequate for purposes of establishing dialogue and negotiations with the communities. The meeting times were too short and that the village committees which were established to participate in the negotiations with OTML and government officials were not given sufficient time to go back to their communities and have meaningful discussions and then return to the officials and negotiate on behalf of their constituents.

9. LEVEL OF INFORMED CONSENT.

Under this term of reference, I am required to survey and present the perceptions of the men and women within the sample communities as to whether they believe the process employed by OTML informed them of the workings, requirements, implications and consequences of the CMCA. In many ways therefore, this term of reference, represents the culmination of the research itself: whether the methods, processes and procedures used by OTML and government officials allowed for a broad based, fair and informed consultation and engagement with the communities so as to obtain their consent to sign the MCA and the CMCA.

The methods used to engage with the communities have been reviewed above at Term of Reference 7 of this report.

Schedule 1 of the various CMCA sets out the Methods of Consultations, which the company and government used to engage with the communities. The responses from the sample communities establish that there were certainly awareness patrols conducted but these patrols were usually short in duration lasting for only 2 – 3 hours in each village. Then, all the people, both men, women and children, were always gathered at one location and the OTML and government officials usually spoke to them together. At neither of these gatherings were drafts of either the MCA, the CMCA or even the legislation discussed with the communities in the sample communities covered in this review research. Neither were these draft documents discussed at the committee levels. Except for the Middle Fly CMCA, no other CMCA was seen in draft form by their respective representatives before the document was signed. Except for the Middle Fly CMCA, no other CMCA party engaged lawyers to represent them. The Middle Fly draft CMCA was given to the Middle Fly negotiation team and their lawyers 48 hours before it was executed. When the lawyers, proposed to negotiate specific clauses of the substantive CMCA, they were told that that was not possible because the substantive CMCA were a pro forma document settled between the Government and OTML. The only provisions, which were open to negotiations, were the Schedules concerning the compensation packages.

Under these circumstances, it is fair to make the observation that the methods of consultation meetings used by OTML were such that it was difficult to establish meaningful dialogue with the communities and then obtain their consent. It is certainly unfair on the communities, not to discuss draft clause of the CMCA and point out to them the implications of certain clauses – for example, Clause 8, 11.2, 13 and 19 of the CMCA and Section 8 of the Mining (Ok Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001 which binds children and future generations of the communities to the CMCA and its processes.

The other methods, which the OTML say it used to consult with the communities were the showing of a video “Ting Ting Nau Long Bihain Taim” and the distribution of a booklet “Ok Tedi the Future”. Majority of the people interviewed in this research report did not see the movie or read the booklet. Based on the finding from the sample field research, it is fair to suggest that these methods of engagement with the communities were not effective.

One interviewee lamented that the company (OTML) and government officials should have widely distributed written pamphlets to all the communities setting out the main clauses of the CMCAs well before they went out on the village patrols. When the officials went out on the village patrols, they should have stayed in the villages for some days and held series of small, large, medium gatherings ranging from formal to informal and then gauge the peoples’ views and then move onto the next village. These did not happen. As a result our views were not properly consulted.

The negotiations skills training courses conducted by PEACE Foundation Melanesia was in fact well received by the people who attended it. Of course not all people in the communities attended the course except selected representatives. The interviewees who attended the course were of the opinion that if the course was conducted for a longer period and the time between the conclusion of the course and the negotiations/consultations with OTML was long, then they would have had time to digest and apply themselves well. The main problem was that the course was conducted too close to the negotiations period.

One interviewee was so impressed with the course conducted by PEACE Foundation Melanesia and suggested that perhaps OTML and the government should have engaged PEACE Foundation Melanesia to conduct the negotiations/consultations with the affected communities and then eventually conclude the CMCAs with the Company and the Government. PEACE Foundation Melanesia would have been ideal because it is an independent party and would not have been pushing a particular agenda but would have been fair and impartial.

When one come to reflect on this suggestion, it certainly does make a lot of sense and is one that must be seriously considered in future.

Finally, this then leads me to ask what is informed consent and how does one go about obtaining informed consent. The Common Policy Guidelines for Participating Botanic Gardens on Access to Genetic Resources and Benefit Sharing (Common Policy Guidelines)²² of the Commonwealth of Australia offers some guidance when it speaks in terms of obtaining “prior informed consent” from the people and institutions whom plants and genetic resources are to be collected from. This Common Policy Guidelines require the various participating Botanic Gardens, when collecting plant material to;

- Abide by applicable law and best practice;
- Obtain prior informed consent in accordance with applicable legislation; and
- Must make reasonable and sincere efforts to make prior informed consent.

Prior informed consent is then defined in its context to mean:

“the consent of...stakeholders which must be obtained prior to access to genetic resources and based on full disclosure of information, such as intended use of the resources.”

The significant thing to note then about prior informed consent or informed consent is that consent must be obtained legally based on full disclosure of information. Not partial or selective disclosure of information. The question that must then be asked is:

²² John Voumard (2000) *Access to Biological Resources in Commonwealth Areas* (Commonwealth Public Inquiry report) Canberra: Commonwealth of Australia. (p. 155 – 156).

Before OTML secured the communities' signatures through their representatives, was full and frank disclosure of information concerning the level of environmental impacts, to the effects of the various Clauses of the Agreements (such as Clauses 9 – 13 and Section 8 of the Act as reviewed above) made to the communities before the various CMCA's were signed. In fairness to OTML, it is acknowledged that there were awareness and community consultations. The interviewees confirm that.

The field survey interviews also confirm that the patrol teams (OTML and government officials) never discussed any draft agreements with them before the agreements, particularly the CMCA's were executed. Clearly the people in the affected communities who signed onto the CMCA were not aware that by signing the CMCA through their representative, they were by operation of Section 8 of the Act (as reviewed above) binding their children and grand children to the CMCA.

Under these circumstances, the only answer to question earlier asked is the one that presents itself: that there was no full disclosure of information but partial or selective. Hence, there may have been very little to no informed consent.

11. CONCLUSION.

In aggregate, the terms of reference of the review were aimed at ascertaining the level of informed consent obtained from the communities by OTML and its shareholders before the execution of, first the Mine Continuation Agreement (MCA) and then the six Community Mine Continuation Agreements (CMCA's) which essentially set out compensation packages for the various heads of environmental damages which the continued operation of the mine will cause. By executing these agreements, the communities have agreed to release and discharge OTML and its shareholders from any civil liabilities outside of the CMCA's.

By operation of Section 8 of the Mining (OK Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001, the execution of the CMCA's "by a person representing or purporting to represent a community or clan" bounded all the members of the community to their respective CMCA, irrespective of whether or not:

- there was express authority from the members of the community authorizing him or her to execute the CMCA on their behalf; or
- all representatives of the relevant community or clan have executed the CMCA; or
- that not all members of the community are parties to the CMCA.

Then by operation of Section 8 (2) of the same Act, the execution of the CMCA's by the community or clan representatives, binds each person in the community or clan on behalf of whom the former has acted for. Not only that the actions of the community or clan representative binds the current generation of people in their respective communities, but also binds "children and persons who are subsequently born into, or who subsequently join, that community or clan".

Section 8 of the Act, therefore seem to allow for a situation where it may not be necessary for OTML and its shareholders to obtain individual informed consent of the members of the communities to be parties to their respective CMCA's. Therefore, this provision attempts to statutorily patch up and validate any lack of informed consent.

As seen earlier, there is evidence from the field research to suggest that in the South Fly, Middle Fly and Lower OK Tedi CMCA areas, there are some people in these communities who have decided to pursue on with the Rex Dagi led law suit in the Victorian Supreme Court and the Gabia Gagirimabu led proceedings in the Papua New Guinea National Court and not participate in the CMCA process. Does Section 8 of the Act now legislatively patch up their consent or negate and renders inconsequential their consent? That appears to be so.

Informed consent is a personal matter and must be lawfully and fairly obtained from the individuals concerned. The effects and operation of Section 8 of the Act are inconsistent with the notion of prior informed consent.

The CMCA under clause 11.2 first declares that:

“the persons signing this Agreement for and on behalf of each member of the communities have power and authority to do so”

and then go on to stipulate that the execution of the CMCA by the communities or clan representatives binds each member of their respective communities. Again Clause 11.2 of the six CMCA is a clause that is not consistent with the notion of prior informed consent.

From the field research, there is evidence to suggest that, neither the texts of the CMCA nor the legislation, particularly clause 11.2 and Section 8 of the Act were put to the people in the communities during the consultation period. Furthermore, there is evidence from the field research which strongly suggest that substantive texts of the CMCA were not subject to negotiations and were never negotiated but were fixed “pro forma” texts and the communities through their representatives were told to accept them. The only provisions of the CMCA which were subject to negotiations, were those dealing with the compensation packages.

The field research also suggests that majority of the consultation meetings which the OTML and government officials had with the communities were for no more than three hours – usually from two to three hours. During these meetings all the people were “spoken to” in one gathering. Under these circumstances, it was therefore difficult to obtain informed consent from the ordinary people in the communities.

MAIN FINDINGS

Based on the material presented in this report, I report the following main findings:

1. That there was awareness and consultations conducted by OTML and government officials with the communities in the period leading up to the execution of the MCA and the CMCA.
2. That the process and method used by OTML to engage with the communities were more suited for awareness rather than negotiations. This findings is based on the consistent comments by a majority of the interviewees who state that the meetings which they had with OTML and government officials were used by officials to inform the communities or were forums at which the officials were seeking endorsements of their positions or even decisions. These meetings however were not forums at which a negotiated outcome was sought.
3. None-the-less, the communities, appreciated the real effort made by OTML and government officials to at least inform them of what they were doing as this level of consultation was never held before.
4. There is evidence to suggest that consultation meetings which OTML and Government officials had with the people from the affected communities leading to the execution of the Community Mine Continuation Agreements (CMCA) did not allow for the views of the communities to be reflected in the CMCA documents. Many of the interviewees consistently state that when

community representatives proposed changes to the substantive parts of the CMCA's, they were denied. This in turn suggests that the reportedly good work done by PEACE Foundation Melanesia in skilling communities for negotiations of the CMCA's was largely irrelevant to the outcome of the process.

5. That there is evidence to suggest that the process used to obtain the CMCA's was inconsistent with the principle of prior informed consent in that Section 8 of the Act and Clause 11.2 of the CMCA allows for one person to execute an agreement on behalf of a community irrespective of that person's connection to or representation of the views of that community.
6. That there is evidence to suggest that the CMCA process was gender blind. There is no evidence to suggest that special measures were used to both inform or solicit the views of women.
7. That there is evidence to suggest that communities were not adequately informed of the details of the CMCA's prior to executing these legally binding documents. No interviewees claim to have seen a draft CMCA prior to execution, let alone understand the terms and conditions entered into by communities under the CMCA's.
8. That there is evidence to suggest that communities had variable and sometimes limited exposure to OTML materials outlining the environmental consequences of the mine continuing to operate, notably the video and booklet. In addition, there is a perception that community consultations were conducted within an inadequate timeframe and did not provide an opportunity for communities to articulate their views to the extent they desired to do so. There is evidence to suggest that the consultations were inadequate for informed decision making by communities.
9. Hence, it is not procedurally proper to obtain prior informed consent of the communities without making full and frank disclosure of all the relevant information and material, particularly where some of these material such as Section 8 of the Act, Clause 11.2 and Clause 15 of the CMCA's are such that they impinge on the substantive rights of the communities in a material way.

Date

Village

Interviewer

Interviewee

Social structure

What are the rights of migrants to this area?

How many families/households in the community?

Map the resources

Household

How many people in your household?

Are they permanent members or visiting the household?

Are you living in your wife's village?

Education

What is your education?

What is your wife's education?

Subsistence

How do you feed the family?

Income

How do you make money?

Do you fish for sale?

Where do you sell your fish?

How many/what kinds of alternate markets have you found?

Expenditures

What are your financial needs? School fees? School materials?

Health? Traditional obligations?

Rent? Fuel? Store food?

Did you participate in the consultation process with OTML Community Consultations Team and the Government Officials leading up to the signing of the Community Mine Continuation Agreements, from July 1999 to June 2000?

Describe how the Consultation Team came to your village or place of residence and talked with you: was there a community meeting?; where you talked together in a group; where the discussion topics given to you before the team arrived?; etc. Please comment.

Can you recall the topics of discussions you had with the consultation team?; Did you understand the issues and took part in the discussions?

Where you ever shown a draft Agreement and taken thru the various parts of the Agreement or such related document?

Do you think you understood what the consultation team was talking to you about?

Are you happy with the way the consultation team (OTML & Government officials) were talking to you about?

Are you in agreement with the decision to continue with the mine and the company OTML and government's decision to pay compensation?

Where women spoken with separately from the men in a different group?

For how long did a particular consultation meeting that you participated in lasted?: Several Hours; Several Days?

Have you read the booklet: "Ok Tedi the Future" produced (and distributed?) by the Department of Mining? If YES, did you understand what was said in it?

Have you seen the movie video produced and shown by OTML officials, concerning the mine's future "Ting Ting Nau Long Bihain Taim"?

Eventually when the (various) Community Mine Continuation Agreements were signed, did you understand what the agreements were about? Did you freely and willingly agree to the signing of the agreements?

How was your representatives and witnesses to the agreement identified and appointed? Who appointed them?

Finally, please state your general comments about the way in which the OTML and Government officials came to your village or place and talked to you about the mine continuation agreements.

Dwelling Structure and Occupancy

Built by paid labour	Built by Company	Built by Family Labour	Total
Modern House			
Makeshift House			
Traditional House			
Trad./some modern materials			

Total

Table 2. Type of dwelling by method of construction in six Trust Villages: June 1994

Attribute	Number of Households	Percent of households
Own a radio		
Own a bank savings passbook		
Own a car or truck		
Own a refrigerator		
House has flush toilet		
Own a washing machine		
House has a shower		
Own an electric stove		
Own a television		
Water obtained from rainwater tank		
Cook with firewood		
Cook with kerosene		

Table 6. Household facilities and ownership of items in six Trust villages

Income source	Number of Households/Adults	of
Earned money from a cash crop in 1994		
Received lease payments in 1994		
Received royalty payment in 1994		
Received compensation in 1994		
Total compensation received in 1994		
Number of adults in wage jobs		

Table 8. Household and adult lump sum and regular payments in six Trust villages

Main occupation	Number of Adults
Progress Factory Worker	
Subsistence farmer	
Old and retired	
Pastor	
Policeman	
Student	
OTML Development Trust Officer	
Visitor	

Table 9. Occupations of adults in six Trust villages

Number of Adults
Church
Lake Murray Local Government Council
OTML
Police force
Progress
No Employer
Grand Total of Adults, aged 15 years or over
Adults who have received some former employment and work training

Table 10. Employer of adult wage earners in six Trust villages

Grade Achieved	Male	Female	Total
None			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
Total			
Now in School			

Table 11. Educational levels in six Trust villages

Source of Income	Value	Percent
Fishing (includes turtles & dugongs) sales		
Hunting sales		
Wages, sale of food etc.		
Ok Tedi Mining Ltd		
Sewing		
Total		
Mean Earnings last fortnight		
Mean Savings and cash in hand last fortnight		
Mean Expenditure last fortnight		

Table 13. Fortnight earnings, savings and expenditure of thirty-nine households in six Trust villages: June 1994

2)

The Impact of Ok Tedi Mine on Indigenous Women along the Fly River

By Elizabeth Matit, Papua New Guinea, 1-9 October 2004, Visakhapatnam, India

Good afternoon my friends. I would like to thank the sponsors of bringing me to this 3rd International Women in Mining Conference to voice for the Indigenous women/children /community living along the Fly River, Western Province of Papua New Guinea. This is based on the life experience faced by the mine-affected communities. All the mine waste of 80,000 tons is dumped directly into the Ok Tedi River every day, which then flows into the Fly River, one of PNG's biggest rivers. The communities living along these two rivers are badly affected by the mine waste. Ok Tedi Mining – the first largest gold mining in Papua New Guinea started operating in 1984.

Shareholders of the mine at present are: Ok Tedi Mining Limited (OTML) - 30% (PNG) Inment (Canadian) - 18% Sustainable Development Company - 52% a window curtain to BHP.

Over the years since the operation of the mine we the people in the flood plains have been victims due to no tailing dam.

River Pollution

Fly River is the second largest river in the country (PNG). It used to be clean freshwater that we used for drinking, washing, bathing, fishing, before the operation of the mine. Now today it is polluted, but we are still using it in the same way as before. Livelihood destroyed - Loss of fish, loss of garden crops. Our people rely heavily in subsistence agriculture, marine sources for protein, the soil is not fertile any more. When women do gardening they do not have the best harvest as they experienced before. Their produce is not the best also for marketing so it makes it too inconvenient for their living. We also rely heavily on fish. Fish and Sago is our staple food with the garden food. Now that the river is polluted our fish too are no longer edible. We cannot fish to bring to the market to sell. It becomes so hard in terms of income for the daily needs of the

family. Our sago palms have been destroyed by the non stop of floods that goes through gardens, sago swamps, rivers, streams even into our hunting places, bush camping places, into the sacred places. The flood is unusual that causes river beds erosion taking place almost every day. The environment is completely destroyed. Forest turning yellowish, then complete drying of tree leaves, especially along the Fly River and Ok Tedi River. This was especially evident in 1996 when a big flood occurred in the area. Due to the changes, the birds and wild animals moved further inner to the thicker forests that make it harder for hunting. Air Pollution and smoke from copper concentrate drying mill There is no proper covering of the copper concentrate storage shed in Kiunga, so the wind blows it (copper concentrate) out in the open air and it's inhaled by people. It's really thick that it affects infants, children, women and the community as a whole. Children getting sick every day, mothers struggling to take them to hospital, sometimes children/infants die. This is an additional burden on women who are struggling to help provide for livelihood caused by the dying environment. The chimney is quite short just a few meters above the normal buildings. Everyday the machine is drying and the smoke gets out to the open air where the people inhale. We believe this could cause some long term health effects but we do not have the facilities and resources to prove this suspicions.

Social Issues

The mine has brought rapid changes in the lives of people, especially in women, youths, children such as:

- Family Domestic Violence
- Welfare problems
- Drug abuse (children underage)
- Wife beatings
- Sexual intercourse (children underage)
- Sex workers (women & young girls underage girls)
- Marriage (young girls marrying elderly man)
- Diseases such as: HIV-Aids VD (Venereal Disease) and others
- Sexual Abuse
- Rape
- Drinking alcohol, smoking (under age children)
- Left school (no education)
- Abnormal child births – causes mother or infants deaths.

These are all caused by “money” which has mentally affected many of us. It is not our culture to use money for exchange for goods and services; it is a modern world “white mans” culture. Our culture is the land. On the land we plant food, find food, find materials to build houses, find herbal medicine, other cultural significances and all that's our heritage. Money is not our culture. It's introduction has blind-folded us and is killing our culture. People already noted a change in the environment from the time operations began particular from the discoloration of water and sediment build up that were causing a decline in the number of fishery harvest. In 1996 a major flood occurred killing about 30 square kilometers of forested land including food gardens. By then the people took the company BHP to court in Australia. Only until 2001 that BHP admitted their guilt and exited. That is when they formed alliance with Billiton the South African company and now called BHP Billiton. They (BHP) are still in control of their 52% share that they left behind.

Also another mining pollution done by the Pogera mine deposit (DOME company).

The mercury in the river (Strickland) may then flow into the Fly River. The Fly River pollution is then doubled from mercury sediments and other pollutants.

Compensation Package

Every year we are given compensation payment. We are given K120.00 (30 US\$) per head in clans according to the number in the families. The other payment is the garden payment of K50.00 (13 US \$) and the river bed payment K80.00 (20 US \$) per person.

This is not enough to take us to the other year for another compensation payment. We have things that we need to set for our families, our children's school fees, their needs and so forth. This money is not enough to cater for all these needs. We women are now from the depths of our hearts crying out for the future of our children. What will it be like when the mining finishes? What would happen when the mine packs up and leave?

Recommendation

1. Before the mine closes, women want "Special Compensation Package Payment" and for OTML to help the women develop and sustain their livelihood within the families, communities now and for the future.
2. Our land is our heritage. We value our land, environment and all that is within our land. All we want now is to compensate according to the values of our environment and our land that has been destroyed. We do not need half payments but full 100% percent compensation payments. The cash payment of 100% and development in terms of infrastructure backdated from 1984 to present. Finally I would like to say to my government of Papua New Guinea "To stop borrowing brains. You have destroyed my LIFE, my LAND and my ENVIRONMENT from borrowing brains internationally and from various sources. Use our god given WISDOM and KNOWLEDGE, UNDERSTANDING for our GOD is the source of everything. RELY ON HIM."

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Western Province

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3) OTML Peer Review Group 1997

1. Introduction

Tedi Mining Limited (OTML) formed a Peer Review Group (PRG) to provide advice, recommendations and peer review related to a human and ecological risk assessment (HERA) of the terrestrial and aquatic ecosystems of the Ok Tedi/Fly River systems downstream of the mine. The HERA was based on the state of knowledge to July 1999. ...

4.0 Summary

The evidence clearly shows that OTML's activities have to date caused major aggradation and flooding in the river valley which, among other effects, have resulted in extensive forest dieback (>500 km²) which is likely to spread further, possibly exceeding 2,000 km². There has therefore at the same time been some loss of biodiversity, at the genetic (i.e., intra-specific) and ecosystem levels, in at least the rainforest system. Based on international comparisons, some loss of species biodiversity is also likely to have resulted already from the mining activities, however this cannot at present be assessed, because of a lack of detailed data on the New Guinea biota as a whole. The forest dieback has been accompanied by replacement (or conversion) to swamp grasslands and other wetland communities, which are more flood-tolerant. Effects of mine-related activities on diversity, abundance and productivity of these wetter communities are also largely unknown. As the wave of mine-derived sedimentation passes down through the river system, it can be expected that secondary rainforest will be re-established in some areas. Present predictions suggest that no general vegetation type will be lost from the Ok Tedi/Fly valley. However, this is not certain. Further, the patterns of distribution of the dominant vegetation types, their relative abundances, and their exact species compositions cannot be predicted. This is again partly the result of a lack of detailed information on the flora of New Guinea, and partly because the details of the current and future topography and physico-chemical composition of the sediments in this river system are also uncertain.

In addition to widespread adverse effects to the terrestrial environment, the aquatic environment has also been adversely affected over a large area. There are very few fish to be found in the Lower Ok Tedi (an approximate 90% decrease in fisheries biomass). In the middle Fly River, there has been an approximate 75% decrease in fisheries biomass and some species are no longer found in this stretch of the river. Further decreases and possibly even a total collapse of the fishery are possible, however the likelihood of this possibility is unknown because the reason(s) for the original decline are unknown. The primary suspect is aggradation and associated habitat loss in the main river channel. Continued aggradation may threaten the ecologically critical tie channels in the Fly River system. The other major threat to the fisheries is ARD that, if it occurs on more than a localised basis, has the potential to totally eradicate the fisheries either through direct toxicity or indirectly by toxicity to sensitive food chain components (e.g., algae).

ARD also poses a threat to the plant communities living in the floodplain. Surface floodplain sediments

presently include tailings and waste rock. Although preliminary modelling and predictions indicate that ARD is not an issue on the floodplain, the work is not definitive and future tailings and waste rock will have a greater ARD potential than was the case in the past. There are no easy solutions. Closing the mine is arguably the best option environmentally but not necessarily the best social option. However, decisions must be made. And these decisions require the best possible and most up-to-date information. Post-DLRA work must focus on the key uncertainties noted in the DLRA and in the PRG's present report, related in particular to what can be done to minimize or prevent further environmental damage should the mine either continue to the natural end of its life or shut down earlier. In this regard, the positive effects of dredging need to be fully assessed. So too do the possibility of ARD and methods to prevent this, as well as reason(s) for the fisheries decline (which may provide insights into how to ameliorate this or at least prevent a catastrophic collapse).

The PRG recognizes the social value of OTML's presence in PNG but are not in a position nor do we have the expertise to evaluate social benefits compared to environmental harm. We commend OTML for the very valuable environmental studies done to date, but caution that more work is needed and almost certainly must continue post-mining if further environmental harm is to be avoided or minimized.

4) The World Bank comments on the MWMP Risk Assessment

...

In August 1999, the Prime Minister of Papua New Guinea, requested the World Bank to provide the Government with comments on the Mine Waste Management Project - Risk Assessment (MWMP), prepared for Ok Tedi Mining Ltd. (OTML) (August 1999). Subsequently, the Risk Assessment and supporting documents were received in mid-October following which this report was prepared by World Bank staff. Given the limited time available, the Bank specialists undertook no supplementary research, relying totally on the information presented in the various reports. No members of the team visited the site or areas affected by the mining operation since receipt of the reports (although two members of the team had visited the mine site in the early 1990s during the course of preparing an overview of the mining sector in PNG). This Technical Note is not meant to be a comprehensive summary of the findings and conclusions of either the Risk Assessment or the supporting technical studies. The Note is being provided to assist the Government in dealing with the broader issues of social and environmental stewardship and responsibility which rest with the Government in relation to the people of Western Province, and not as a shareholder of OTML. To the extent that any technical information is presented (e.g. in Section B, following), it is for the purpose of providing context to matters covered in subsequent sections of the report.

... From 1984 until the end of 1998, the average rate of discharge of tailings and waste rock into the river was 65 million tonnes per annum: (Mtpa) of which 44 Mtpa was waste rock and 21 Mtpa was tailings. The tailings particles are all less than sand-sized and contain copper and other heavy metals (?): The waste rock particles are predominantly larger sized gravel material and boulders but much of this abrades over time to form finer and more readily transported material. The tailings material and the abrasion products of the waste rock are being deposited in the Fly River system including the Ok Mani and the Ok Tedi and are significantly affecting the hydrology of the system mainly by raising the bed level of the Ok Tedi and Fly Rivers. Aggradation and/or high suspended sediment loads have produced physical impacts in the form of loss of fish habitat, reduced fish populations and dieback of vegetation on the floodplains. The tailings and the waste rock also contain copper, other heavy metals and diverse sulphide minerals which have the potential to register adverse chemical and biological effects on living things. ...

The Risk Assessment reports confirm the widely acknowledged view that the environmental impacts of mine operation are significant, and have been far greater than initially anticipated. The report also confirms the understanding that the impacts are likely to worsen, and will continue for some time even after the mine has closed. The Risk Assessment makes a strong case for the following mechanism of damage. First, aggradation of the riverbed, aggravated by suspended solids levels, change of hydrology of the river, altering the natural flood and low water levels of the river floodplain. Hydrologic changes are also probably affecting the nature of connection between the river and off-river water bodies, which are extremely important and sensitive ecologically, Dissolved copper concentrations have increased following the

opening of the Mine, but the problems associated with copper seem to be “episodal” (associated with what are thought to be spikes in dissolved copper concentration) rather than chronic. ...

The discharge of tailings and waste rock from the mine far exceeds the sediment transport capacity of the river system downstream of the mine. The result is that sediment is accumulating in the beds of the Ok Mani, Ok Tedi and middle Fly Rivers which reduces their flow capacity and increases the incidence and severity of flooding in the affected areas. Over-bank flows result in deposition of mine tailings and abraded waste rock on the floodplains and this is resulting in die-back of vegetation in those areas. ...The amount of dieback has increased steadily over the life of the mine and will continue to do so into the future; the affected area was 18 sq kilometers (km²) in 1992 and it is currently about 480 km². According to the Risk Assessment, the estimated area of land which is ultimately susceptible to dieback induced by mine operations (the Maximum Impact Area or MIA) ranges from 1278 – 2725 km² depending on the assumptions made. ...

The data: the Risk Assessment indicates that from an environmental standpoint, the best option is to close the mine immediately. But the Risk Assessment also states that from a social standpoint this would result in a potentially disastrous situation because there is no preparedness for mine closure. But the Risk Assessment does not adequately address the trade offs between environmental and social costs nor does it provide any information or details on the mine closure plan or broader mine closure strategy. This is a critical shortcoming of the Risk Assessment since it is not possible to assess the appropriateness of the social and environmental mitigation measures that are being considered in the mine closure plan and whether international best practice is being followed... In examining the Risk Assessment another important finding is that the Risk Assessment does not provide an adequate evaluation of risk from the government's perspective since it addresses risks from the financial standpoint of the company and its shareholders and not from the standpoint of the broader scope of issues the Government must consider. This note also finds that the four options presented in the Risk Assessment do not represent the only options available and the Risk Assessment fails to consider the option of early mine closure at such time as a mine closure plan is in place that address the social impacts in a satisfactory and sustainable manner.

...There is a substantial difference in the quality, content and scope of the Risk Assessment work on the social side compared to the environmental side. ...The imperative for mine closure has different and even conflicting environmental and social implications. The social and political risks governing closure even if not quantified in financial terms can have grave consequences if not properly understood and managed. For example, the greatest attention to social impact in the Risk Assessment is provided in the early closure option which postulates a dramatic scenario of social breakdown associated with "shortages in food supply resulting in fires, over-hunting ... and increases in store food prices. The population was considered unlikely to reduce until driven from the area by hunger the overall result would be a shift from a cash or cash/subsistence economy to subsistence existence and malnutrition could become prevalent. Other predicted adverse impacts were the removal of rubber industry subsidies: and the immediate loss of much of Western Province's funding (50%) with resulting declines in education and health services”...

... The only reports having a bearing on the social dimensions of the project included two health survey reports, peer reviews of these reports, and a report of a socio-economic survey (Report No. 17). The baseline health survey report (report 15) found no connection between the observed health conditions and discharges from the mine and analysis of potable water indicates that the annual average concentrations of copper and lead being recorded in the Fly river system appear to pose no substantial human health risk and, in any event, the majority of people in the affected area do not rely on surface water for their drinking water supplies. While Report 17 provides very useful information regarding the social aspects and impacts of the Ok Tedi operations it is a very modest effort compared to the many volumes on environmental aspects and a much higher profile and more extensive work is needed regarding social sustainability. The complex social environment in which Ok Tedi is situated, exacerbated or arguably caused by the fact that Ok Tedi is the only agent of development in the Western Province, has meant that closure has multiple ramifications for the community impacted by its operations and for the government with whom overall responsibility rests for the welfare of its citizens...

Good practice (and World Bank guidelines) would discourage Government from reaching a conclusion on issues of such substantial political, social and economic magnitude without engaging in a process of public consultation to help it to assess the political dimensions of the problem. This is also an area that NGOs (local and international) may well make a major issue of, as already indicated by the number of NGOs that expressed their concerns in this area. A consistent failing in many large resource projects is the lack of informed participation of local communities in both the broader discussions on the project itself and specifically in the social and environmental programs. Closure needs to be prepared in a participatory manner and communities need to invest and own the closure option (1st level stakeholders). There is also a wider public audience consisting of NGOs and the wider community in PNG who stand to be affected by Ok Tedi's closure (2nd and 3rd level stakeholders)...

... Report 17 shows that while significant differences occur with regard to Awin and Yonggom attitude and perception to the mine, both groups overwhelmingly considered that the quality of their lives had deteriorated since 1981, with the Yonggom being roughly twice as negative on this point as the Awin (notwithstanding that objective data regarding life expectancy, educational opportunities, and other measures of well-being point have improved). Both groups rated the performance of both OTML and the Government negatively. With regard to mine closure, the Awin (who have engaged in the cash economy generated by the mining operation to a greater extent) were rather more concerned about the implications than the Yonggom. **But it is clear from Report 17 that information, especially regarding potential mine closure, has not been disseminated effectively, perceptively failing to reach all target groups...** [Emphasis added]

The whole issue of compensation has played a critical role in the history of Ok Tedi. The key agreement that existed prior to 1996 concerning compensation was the Land Lease Compensation Agreement. Compensation was limited to land lease compensation payments, gravel royalties, and general compensation for food gardens and economic crops affected during construction which was undertaken between Kiunga and the mine site. Since then the scope of compensation has expanded considerably and today 6 different compensation schemes exist. These additional compensation payments have enhanced the bargaining position of the recipient villages and could possibly have changed the power structure in those areas. One of the most important, and highly contentious concerning compensation, is the 1995 RESA (Ok Tedi Restated Eighth Supplemental Agreement Act), where all communities deemed to be affected by the changes to the river system are eligible for compensation without proof of loss....

There seems to be limited understanding by almost all the communities in the Lower Ok Tedi area with regard to the various compensation agreements. The compensation agreements have not met the expectations of the affected peoples. The Yonggom people are particularly alienated from the company and discontented with the outcome of legal actions which have been launched against the company. The situation is not helped by the fact that there are major misconceptions with regard to the Lower Ok Tedi agreement made in 1997 (Report 17:69). For example, there was an almost universal belief (in both the Yonggom and Awin communities) that OTML should "fulfil its promise" to build new houses for everyone in the area - but this is not in any agreement.. There is also a widespread belief that OTML will provide further compensation for and/or rehabilitate land lost due to tailings deposition whereas both the company and the Government are reportedly of the view that agreements already in place cover all compensation and mitigation measures (i.e. that peoples' expectations regarding additional compensation/rehabilitation are misguided). Such expectations, although obviously built on false premises, nevertheless need to be better managed under the consultation program so that the communities fully understand what is actually in the agreements...

It is likely that the closing of Ok Tedi would be perceived as the shutting off an economic life line with all its attendant problems. Further details are needed on how the general compensation monies (K10 paid between 1984 - 1994), and the K4 million a year which Ok Tedi continues to pay under the Eighth Supplemental Agreement, has been used and the outcomes that have resulted... The data in the Risk Assessment regarding foregone profits (for the early mine closure option) indicate that OTML is expected to be very profitable from 2000-2010. OTML's financial outlook needs to be presented in order to demonstrate what proportion of the benefits are to be shared with the local people. ..

OTML has become the principle agent responsible for providing for a variety of social services such as health, education, training programs, infrastructure development and local business development, in the Ok Tedi, Fly River areas. Half of the Western Provinces funding comes from Ok Tedi. Significant advances have been made in the area of public health with infant mortality down from 300 per 1000 to less than 15 per 1000, average life span up from 30 yrs to 50 yrs and the incidence of Malaria decreasing from 70% of children to less than 15% and amongst adults from 35% to less than 6% (Ok Tedi Mining Ltd. Community and Environment Program 1999).

The objectives of the Risk Assessment were to identify and quantify the risks associated with the various mine waste mitigation options which were being evaluated so as to define the highest realistic financial exposures associated with each. As previously mentioned, the options considered in the Risk Assessment were:

- Dredge option - continuation of the current trial dredging scheme (nominally, about 20 Mtpa) until the expected end of mine life in 2010;
- No-dredge option - demobilisation of the dredge at the end of the trial period in 1999 and continuation of mining until the end of mine life in 2010;
- Tailings option - continuation of the trial dredging operation to the end of 2001 during, using the dredge material to build an embankment in which to store tailings, and the piping and storing of mine tailings until the end of mine life in 2010; and,
- Early mine closure - closure of the mine in the year 2000.

...The Risk Assessment attempts to determine the total cost that is most likely to be incurred by the company for each of the scenarios, based on widely accepted techniques of identification, characterization and quantification of risks.

...The risk analysis confirms what we would expect on a purely intuitive basis. First, the lowest cost to OTML is to continue operating until 2010 under the nodredge option. The highest cost option is to close the mine early and forego 10 years of operating profit. From an environmental standpoint, the best option is to close the mine immediately since this avoids the discharge into the Fly River system of some 200 - 300 million tonnes of tailings and mine waste which will occur if mining continues to 2010. But from a social standpoint this would result in a potentially disastrous situation because there is no preparedness for mine closure.

...First, the Risk Assessment Does Not Provide an Adequate Evaluation of Risk from the Government's Perspective The Risk Assessment is incomplete in terms of the integration of social and environmental costs so as to make them comprehensive enough for the Government to decide on next steps i.e. the Risk Assessment does not provide an adequate evaluation of risk from the Government's perspective given the broader scope of issues the Government must consider. Nor does the risk assessment adequately address the trade offs between environmental and social costs according to the timing of mine closure. ...Second, the Four Options Presented in the Risk Assessment Do Not Represent the ~ Options Available. There are two dimensions to this issue. First, the four options analyzed do not appear to all be fully realistic options. Most importantly, the Risk Assessment indicates that the early closure option (under which mine operations cease completely in the year 2000) would result in severe social crisis and disorder. ... The most important point to be made is that the environmental work suggests that earlier closure is the best option but the social assessment indicates that improper and hasty mine closure can result in even worse and longer term impacts than that experienced with the working mine.



...The Ok Tedi 9th Supplemental Agreement (PNG Legislation) and the CMCA's:

It is widely believed that these agreements violate constitutional rights of the populations.

The community mine continuation agreements (CMCA's), and the Ninth Supplemental Act were subject to constitutional challenge by former South Fly MP, Gabia Gagarimabu, and by the present Prime Minister Michael Somare during his period in opposition. Somare got in power soon after bringing this case.

As part of the settlement of the court case in Australia, BHPB and OTML have negotiated for the discontinuation of these proceedings. Gabia Gagarimabu has discontinued his case, while Somare is unlikely ever to follow up on his proceedings while he is Prime Minister.

The rights of affected peoples under present agreements (CMCA's)

How these laws impact upon people:

- Authorise the signing away of between 40,000 -50, 000 people's common law and customary law rights through the signatures of only 200 people.
- Authorise anyone living in a village to sign away the rights and interests of the whole village including principal customary landowners
- Authorise one clan to sign away the rights and interests, including the interests in land and water, of another clan.
- Fails to compensate people for the true values of the resources that have been destroyed, or for future environmental damages warned of in environmental predictions, but that have not yet occurred
- Removes the rights of future generations to make claims for damages not yet quantified, including for the health impacts associated with pollution of land and waterways
- Landowners do not have the rights to go to court if a disagreement occurs in relation to the CMCA's, and do not have the right to further compensation if the damages get worse than expected. The only right they have is to discuss the issues with the company.
- Evidence, including a report by Lawrence Kalinoe, Dean of law at the UPNG also suggests that the processes of informed consent was only partial and selective and that the agreements were "a legal device to lock in and keep the affected communities from pursuing individual or separate lawsuits for environmental damage and resultant loss and nuisance.. to control and minimize the extent of liability to levels it knows it can afford... not to reflect a fair or equitable value for damage" (see Appendix 1, findings of the Kalinoe report)

How these laws impacts upon the Western Province and PNG in general:

These laws allow a major mining company that records yearly profits of up to A\$1-2 billion dollars to escape responsibility and liability for damages resulting from its actions in PNG, and to place the burden of these actions upon the PNG people and government. In particular the law:

- Ensures that the bulk of the enormous costs of rehabilitation and remediation is left with the PNG people, and particularly with the people of the Western Province
 - Prohibits the state or its agencies taking any action against BHPB, and guarantees BHPB immunity from liabilities now and in the future
 - Prohibits the national government from supporting its own people claiming compensation
- Limits the contributions of BHP and OTML to compensation and rehabilitation to the amounts gained from future profits of the mine. The costs of BHP's reckless disregard for the wellbeing of the people of PNG far exceeds this, and will be a deadly legacy for the people of the Western province.
- BHP did not fully disclose information on the level of environmental impacts, on the uncertainty of future damages or on the effects of the clauses of the agreements they signed. There was only partial and selective disclosure, and thus little to no informed consent
 - All changes suggested by landowners were refused, landowners were told the agreements were pro forma and that specific clauses were not subject to negotiations
 - The agreements were not openly discussed or explained to communities before they signed them, people were not informed of the workings, requirements, implications or consequences of signing. People did not see the documents prior to signing them, let alone understand the terms and conditions of them.
 - Majority of people from the communities did not see the background materials which were meant to inform them of the impact of the mine continuing
 - Any person who held him or herself out to be a community leader and a representative of the community bound the whole community to the agreement, irrespective of the actual level of consensus in the community, or whether any express authority has been given for this person to sign the agreements
 - The agreement binds each person upon whom that person says they are acting on behalf of, including, without limitation, children and future generations

If the Victorian courts find for the landowners (who chose not to be party to the agreements with the company), and these courts order either construction of a tailings storage facility or damages for environmental damage to any member of the communities then there will be no obligation for continuing compensation payments to any of those who signed the agreements instead of going to court....

5) Lawrence Hammer tables (from Hammer 1996):

YEAR	GON	SYPH	DON	TOTAL
1972				15
1973				34
1974				97
1975				78
1976				84
1977				86
1978				103
1979	70	5	15	90
1980	65	20	25	110
1981	100	35	34	169
1982	85	40	35	160
1983	75	60	55	190
1984	65	90	80	235
1985	62	84	73	219
1986	104	177	131	412

DISEASE	G	D	S	P	N	G	V	v	T	C
# CASES	1,457	1,377	1,335	188	60	28	4	15	18	5
G	--	39	55	1		1		1	1	
D	39	--	35	13			3	1	1	
S	55	35	--	8				5	1	
P	1	13	8	--						
N					--					
G	1					--				
V		3					--			
v	1	1	5					--		
T	1	1	1						--	
C			4							--

legend: G=gonorrhea; D=Donovanosis; S=syphilis; P=penile ulcers, non-specific;
 N=non-specific urethritis; G=genital herpes; V=vaginal ulcers, non-specific;
 v=venereal warts; T=trichomonas; C=condyloma acuminata.

All other numbers refer to concurrent infections: 1,457 cases of gonorrhea, 39 of gonorrhea and Donovanosis, 55 of gonorrhea and syphilis, and so on.

6)

Simon
M/17
TULANAS CAN
2/5/2004

Itch - Itchiness of body
very painful
It started after
washes at Fly River.
On treatment but
can't help

Plan: SEE H/O OR DR. FOR
FURTHER MANAGEMENT.

Rx ATTENAROLAN 1000g SPAR
5/5/04 AT NIGHT
give 25mg phenygan
w/ at night
40mg prednisolone

CLINIC

Body: Itch
skin peeling
① palm
② eye w/ face
thighs perineum

occurred 30/04/04 after
bath in one of the creeks at
approximate canal lower Fly
Fly very painful exposed to
heat where the head of travel but
sunlight not bright.
Not after travel nil other complaints

Rx ①: 40mg Prednisolone ~~daily~~
x 4/7
: 25mg Phenygan bid x 5/7
: Return 5/5/04 w/

Above: 11/5/04 medical reports from Kiunga District Hospital noting cases of 'itchiness of body, very painful/It started after wash at Fly River'; and 'skin peeling, palm, eye and face, thighs... after bathe in one of the creeks at approximately 2 km away down the Fly.'