

**SOCIAL MONITORING AT THE
OK TEDI PROJECT
Summary Report to Mid-1993**

OK-FLY SOCIAL MONITORING PROJECT REPORT No. 3

for Ok Tedi Mining Limited

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PREFACE

This volume is an interim summary of work done to date as part of the Ok-Fly Social Monitoring Project. Internal working reports contain the full case materials for the examples discussed here and contain village profiles and other supporting data for the approximately 115 villages in the Ningerum, North and West Awin, North and South Ok Tedi, and Moian Census Divisions covered by the project to date.

Detailed 1:100,000 scale maps of the Ok Tedi impact area, '*Map 1. Mt. Fubilan to Konkonda*' and '*Map 2. Konkonda to Binge River*', have been produced separately as part of the social mapping tasks of this project.

Work is continuing in 1994 in the Middle and Lower Fly sections of the river system and on follow-up investigations to issues raised in this summary.

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LOCATION MAP

Figure 1. Location map: villages, main centres and census divisions.

I

THE OK-FLY SOCIAL MONITORING PROJECT

What social monitoring is about

Social monitoring is the name given to studies of the human communities that live around a development or industrial project. In the mining industry in Papua New Guinea, it is simply a part of *mine monitoring*—or, more formally, an ‘environmental monitoring and management programme’ (EMMP). In an EMMP, social monitoring is a counterpart to pure environmental monitoring, i.e. studies of the physical environment.

(In a pre-project EP, or Environmental Plan, an SEIS, or Socio-Economic Impact Statement, is the counterpart of an EIS, or Environmental Impact Statement.)

*E.g. Jackson et al.
‘The impact of the Ok
Tedi project’*

In conventional terms, the purpose of environmental monitoring is to ensure that industrial operations are safe and that impacts on the external environment comply with limits set by regulatory authorities, as specified by statute and the project’s agreements.

With social monitoring an extended definition of objectives is required. Firstly, a ‘social environment’ is not a given that can easily be monitored for readily understood ‘impact’; the concept must first be defined in local terms. In practice, this preliminary task is so large as to constitute a substantial part of a social monitoring effort. In the present context, the task of defining the social environment falls under the heading of *social mapping*.

The second extension concerns the question of change. Impact on the physical environment can validly be assessed with reference to a baseline study which has quantified what are expected as ‘normal’ environmental conditions: that is, in terms of water and air quality, species diversity and biomass, the presence of metals in the soil, and so on. A similar method of comparison cannot easily be advanced for social monitoring, because social change is almost certainly intended to be the outcome of permitting a large industrial development to occur next to a population centre. In these circumstances, baseline data are likely to be seen as the *starting point* for change, not the point to which, say, a mine-impacted society should return at the end of mining.

It is unlikely that the topics for investigation in social monitoring studies will be known in advance in more than general terms. While this may appear reactive, it is the *methods* of social monitoring that are predictable and generally highly productive of new information. These are drawn from anthropology, geography and companion social science disciplines.

This project

Social monitoring at Ok Tedi has its roots in planning and social impact work led by Richard Jackson in the pre- and immediately post-construction period (1977-84). Contributions to the earlier work came from the National Planning Office; it was intended that once the mine was running the then Institute of Applied Social and Economic Research (IASER) in Port Moresby would continue it indefinitely, using a variety of funding sources, including those available to it as a government institution.

See the select bibliography at the end of this document for details.

For various reasons, including the ill-health of Jackson, the principal researcher, only two short post-construction reports eventuated and the idea of co-ordinated social and economic monitoring at the two mines then operating, Ok Tedi and Panguna, essentially lapsed. Had this not happened, it is still hard to say whether useful guidance could have been offered to the operators, or to the mining and petroleum industry as a whole in the lead up to the opening of the Porgera, Misima, Kutubu and other projects.

But it is possible to say that a decade later fresh initiatives are being attempted, such as the development of industry-wide approaches to local business development and community relations. (The PNG Chamber of Mines and Petroleum convened the first workshop on this subject in Port Moresby in August 1993.) Unisearch, drawing on the University of Papua New Guinea's resources and contacts, has now found work on social issues at about a dozen prospects and operating projects since 1990, and this effort also carries with it an implicit attempt to arrive at common solutions.

Followed by a second, also in Port Moresby, 4-5 March 1994.

The present *Ok-Fly Social Monitoring Project* (OFSMP) was conceived in May 1991, when OTML management met with consultants from the University of Papua New Guinea in Tabubil. The terms of reference drawn up at this meeting were to carry out 'broadly conceived social research in the area between the OTML Lease boundaries and the mouth of the Ok-Fly system' and the objectives were to provide 'clear indication on social changes' whether these had been brought about by the presence of the mine or whether they had arisen independently.

Field investigations commenced in 1991 with four principal and two senior student assistant consultants having now contributed to the project's work: all are Papua New Guinea specialists with either University of Papua New Guinea teaching and research experience, long-term research experience in Western Province, or both. Six working reports have been produced under the single or joint authorship of the various members of the consultancy team. The aim of the remainder of this document is to summarise the key findings of the project so far.

II

MATTERS OF GEOGRAPHY: ACCESS TO MARKETS AND SERVICES

What we did

One of our first tasks was to establish the historical background of change in the North Fly. Essentially this was a question of identifying the key events that have altered the accessibility of services and services centres to a rural population that is particularly scattered by Papua New Guinea standards. We quickly confirmed the fact that, as commonly the case in lowland and coastal Papua New Guinea, the first improvement in accessibility came about through a substantial internal re-organisation of settlement geography as well as through exogenous development efforts initiated by the Australian Administration, missions, and other newcomers.

Historical material on public record, including patrol reports, was collated in our first working report. A forthcoming issue of the UPNG journal Research in Melanesia will make this available.

Many subsequent parts of our study have drawn on this background material. For example, in discussions of the rubber industry our analyses have hinged on the factor of transport between rubber growing villages and market. This has been seen in both the geographical distribution of rubber plantings and the manner in which growers have historically been able to respond to price fluctuations.

Focussing on specific developments that have taken place since the start of mine, we paid special attention to the provincial government programme of building secondary roads. We approached this in two ways: by examining provincial funding arrangements and budget allocations to roads, and by physically inspecting the results on the ground.

What we found

To recap, historically the Awin, Ningerum and Yonggom people of North Fly lived in homesteads scattered across their clan territories. None of three groups previously had words for 'village' prior to government contact, the largest settlements comprising only a handful of houses. In colonial times, the homesteaders collected themselves into conventional villages. The Ningerum adopted the Malay loan-word *kampong* to describe the new settlement type, and the Awin the Motu loan-word *hanua*.

Village informants say patrol officers told them the government wanted them to move into conventional villages, and so they complied. But many of the details of how this process of aggregation took place remain to be investigated; that is, what local decisions were made in regard to siting and which particular local clans branches should aggregate with which other ones.

Some clues are to be found in marriage patterns. The modern villages have typical populations of about 200 people, and there is a definite preference for marriage either within the village or with an adjacent village. We quantified this with data we collected on recent marriages. Although we were not in a position to draw samples in a rigorous manner, we found a cruder method of asking for details of the last ten marriages at a village gave satisfactory results. Out of 62 marriages at eight West Awin villages, 56% of wives originated in the same village as the husband and a further 32% in a nearby Awin village. Of the remainder, none came from further afield in the Awin-speaking area; there were four Yonggom wives (from west of the Ok Tedi) and one each from the Southern Highlands, Eastern Highlands and Enga Provinces. A similar pattern was found among Yonggom villages.

Figure 2. The origins of 62 recent brides in West Awin villages.

The first thing that this tells us is that the traditional, pre-contact pattern would have been of very close marriage and indeed of limited social contact between non-neighbouring settlements, even among speakers of the same language. The second thing is that the post-contact aggregation of local clan branches into villages essentially took place among the small circles of people who formed face-to-face communities before contact and that, despite considerable relocations of settlement site in some cases, this traditional pattern of close-knit communities has not changed very much.

However these things occurred, it is the legacy of what happened that, to this day, a typical North Fly village is made up of a cluster of local clan branches, not all of whom own land at, or even near, the village site. Some clues to the composition of villages are to be had in those of their names that are descriptive, e.g. 'Grehorsore' = Gre + Hore + Sore clans; 'Menumgrup' = Menum + Grupe clans. (But other descriptive names just indicate the place, e.g. 'Briompene', mouth of the river Briom.)

This has far-reaching consequences ranging from the simple dependence on others for permission to borrow land for gardening to the considerable difficulty of starting any form of cash-generating enterprise—and maintaining it in profit—on another's land.

Subsequent locational factors

We also found considerable locational consequences of the choices, in the late 1950s and early 1960s, made by the Montfort Catholic Mission and what is now the Evangelical Church of Papua, in selecting sites for mission stations from among the newly founded villages. The two missions established schools and brought basic health care to the area.

The 1960s and early 1970s were marked in the Awin- and Yonggom-speaking areas by further wholesale movements of communities onto waterways like the Ok Mart (Wai Mari) and Lower Ok Tedi (Alice) or the line of tractor roads linking Kiunga and Rumginae (passable by September 1968), and the Ok Mart and Ningerum (passable by about 1970). In this instance, the driving force was the villagers' interest in tapping rubber and having access to markets.

Most lately, the construction of the Kiunga-Tabubil Highway (1981-82) has been the most important recent change affecting the daily lives of the majority of Kiunga District villagers, because of the further re-alignments in settlement pattern and vast improvements in service access that this has brought.

'Corners'

Western Province is noted for what are locally known as 'corner' settlements, namely non-traditional settlements typically built on the edge of towns and stations—at least away from the inhabitants' traditional land. Two types stand out; firstly, the 'orthodox' corner made up of semi-permanent local area migrants such as is found on Ningerum station and at Kiunga. The second kind is what might be termed the 'highway corner'. Here, the inhabitants have not yet completely abandoned their home village site, which is simply inland from the

highway, and maintain—or have it in mind to maintain—dual residence; examples are Pampenai, Wanginai, and Demesuke all of which still exist as substantial settlements a few kilometres from the highway along bush tracks.

Pampenai, Wanginai, Demesuke - see map, south of Ningerum

In either case, corners may be ethnically homogeneous—made up of people from the same village—or they can be quite mixed. At the ‘Ok Tedi Bridge’ corners on the west bank of the Ok Tedi near Tabubil, Jackson recently found that the settlers were drawn from at least thirteen Kiunga District villages, and included people from all three main language groups (Ningerum, Awin, Yonggom). The particular form that corners take in Western Province tends to reflect the great distances between rural communities, however accessible, and the main centres; many inhabitants still maintain their villages houses as their principal homes, but have to be in town to do any form of cash-generating business. This is somewhat different from the bigger urban centres in other parts of Papua New Guinea, where so-called ‘squatter’ settlements have long become the permanent homes for some. It is also different from the pattern in more populous rural areas where denser networks of roads provide easier access to markets and services, and where cash crops like coffee and cocoa keep people employed on their own land to a greater extent.

See R. Jackson, ‘Cracked Pot’, p. 126.

A case in point is Somoikwankia, an Awin village of about a dozen houses I visited in September 1992. It is situated in the bush well away from the Highway and was completely unoccupied at this time, the inhabitants being absent in their corner at Kiunga. The village has not been abandoned and the significant thing is that a road from Ralengre is under construction in its direction. As soon as this road joins Somoikwankia to the Highway, I am confident that its people will take up more continuous residence there. Similarly, the construction, in time, of other feeder roads around the District should help to retain people in the villages (provided that road-building keeps in step with other aspects of rural development, like improvements to village services and an opening up of economic opportunities) to a much greater extent than it will encourage them to leave the village for the town. The latter is a popular perception in Papua New Guinea when there are suggestions to build new roads into ‘remote’ areas. In any case, it is almost certainly true that all those who have wanted to go to live in town have made that choice already.

The road received a further large allocation in the revised provincial budget for 1993.

Verdict

The social changes brought about by the Ok Tedi mine are closely bound up with the transformation of a ‘remote’ region, in which formal economic activity was almost non-existent, to one that has one of the largest towns in Papua New Guinea, much improved basic infrastructure, and access to a wide range of services. This is an almost wholly positive aspect of modernisation.

However, away from the well-maintained Kiunga-Tabubil Highway the state of the road network in the Kiunga District can only be described as indifferent. The consequences—among many other things—are the continuing difficulties in transporting materials for teachers’, nurses’ and aid-post orderlies’ houses, supplying these people at their schools and health posts with basic equipment

and supplies, paying them promptly, and providing district managers and extension workers with the means of reaching people in their villages on a regular basis.

The bottom line is that modernisation is unevenly spread within the District. There are nodes of activity at Kiunga, Ningerum and Tabubil, and people who have village land along the highway find themselves at an advantage. But most others are torn between struggling to do 'projects' at home, but away from the road system, and looking for opportunities elsewhere by establishing themselves in a 'corner' nearer a school, road or town.

III

MATTERS OF HEALTH: 'BEING SICK ALMOST EVERY NOW AND THEN'

What we did

As a team coming from the disciplines of geography and anthropology, we did not set out to investigate health from a clinical point of view. Others (though not many others) are attending to this and have begun elsewhere to build up a picture of the disturbingly poor standards of life expectancy and basic health in the North Fly. We found ourselves able to make a useful addition to this picture in three ways: by collating available health statistics, by examining historical and recent demographic data, and by interpreting what people say (to anthropologists) about their essential state of existence.

*Relevant works are
Taukuro, 'The WHO
...'; Ulijaszek, 'The
Ok Tedi ...';
Schuurkamp 'The
epidemiology ...' and
Turner 'Filariasis
and hepatitis ...'*

What we found

The epidemiology—the patterns of health—of the Kiunga District are as poorly known in quantitative detail as were those of the Tabubil District prior to the establishment of formal health facilities at Tabubil. We found that the only definite statement we could make is that the area suffers from holoendemic mosquito-borne diseases (basically malaria and filariasis), and life expectancy is much poorer than areas at higher altitude with little or no malaria.

We may suspect that maternal mortality is unnecessarily high, and that infant mortality has not fallen to the impressively low levels now seen in Tabubil, but we cannot prove this directly from hospital returns.

Conventional health statistics

Our analysis of what data there is to hand throws little more light on the situation than this. A major problem we found is that the statistical returns from health centres and aid posts are highly unreliable. For example, out of ten Health Sub-Centres in the twelve Census Divisions covered by the activities of the Ok Tedi/Fly River Development Trust, only four reported births to in-patient mothers in the last reporting period. We are not even sure how long this reporting period was. Another unobtainable figure is the percentage of children receiving their basic immunization shots, as they should do under the government health services in all provinces. Informed opinion suggests that the percentage is less than 25% across the District.

Demography

Census figures fluctuate in a rather irregular way in this area. In part this is due to genuine settlements shifts and movements of population, but a continuing problem is the lack of correspondence between census points, as named in a particular census, and the 'real' villages extant at the time.

An interesting measure of health is the high growth of population apparently shown in the difference between 1980 and 1990 census counts. Government figures apparently show that a set of ninety-four villages now in the Ok Tedi/Fly River Development Trust grew in population from 16,069 to 21,942 over the period, nominally an increase of 37%, or about 3.2% a year. This is far above the national figure of about 2.3% a year and, on the face of it, would seem to bear witness to very favourable health conditions. However, this is unlikely; districts in lowland or coastal parts of Papua New Guinea known to have above-average growth rates are generally found in the New Guinea islands where environmental conditions, diet and access to health services are notably different.

A statistical reason to discount this high growth rate is our finding of a consistent imbalance of females to males in both contemporary and historical census figures. It is a convincing argument, established in the literature, that while a normal ratio of 105 boys are born per 100 girls in Papua New Guinea, females experience more serious health risks than males and die at a faster rate in all age groups. Taking the population as a whole, female-male ratios prove to be similar to those of other developing country regions where literacy is well below 100% and health awareness poor, *regardless of the overall standard of health delivery*. In these populations, health outcomes inadvertently favour males because, for example, more boys attend schools and health posts are generally near schools, deaths and injuries to men through fighting have declined faster than have the health risks that women are exposed to. Additional local explanations may be advanced in each area.

Aired in various papers over the years and in relation to censuses from all parts of Papua New Guinea.

	M	F	Total	Ratio	'Missing' females
National Census 1980	8329	7740	16069	0.93	756
National Census 1990	11135	10807	21942	0.97	551

Table 1. Female-male ratios in 94 Trust villages 1980-1990.

Table 1 shows the sex ratios in the census data just mentioned. The 'expected' ratio is 1.02, a figure which averages the biological excess of boy infants with the expected excess of aged women in a non-sex biased population. *This is regardless of overall life expectancy*. The meaning of the toll in human lives can be understood by multiplying the actual totals of men in the 94 villages by 1.02 to obtain 'expected' totals of women and therefore to be able to place an actual figure on the number of 'missing' females. For the 94 Trust villages, this was 756 women and girls in 1980 and 551, an improvement, in 1990. These women and girls are real persons who were born and have died leaving a male counterpart alive. It is important to remember that this is in excess of regular deaths occurring to both males and females; the 'missing' women are *extra* deaths above and beyond the normal level of mortality.

1.02 is obtained for more advantaged developing populations and is attained in Kiunga District villages next to health sub-centres and hospitals (see Figure 3).

Further considerations are that generally more men from remote rural villages are absent in towns and plantations in Papua New Guinea. Migration effects need to be considered before our finding is accepted, but our preliminary

judgment in a smaller sample of Awin villages is that adding in absentees will make the statistics worse, not better.

The clues about mortality given by this indirect method make it unlikely, then, that the census data reflect natural population growth at the high rate that the raw census enumerations purport to show—well above the average for Papua New Guinea—and hence a reasonably well-off population from a health point of view. It is most likely that under- or over-enumeration has affected one or both of the censuses. Further kinds of bias are also possible.

Microscale variations

Female to male ratios as low as 0.80 are not exceptional in Awin villages. We claim to have found a definite correlation between access to health posts and sex ratios among twenty West Awin census units positively identified with villages visited during fieldwork. Twelve of the villages were found in 1955 patrol census data, providing a useful control. The present-day villages were classed as follows:

- villages with *poor access*: no aid post in the village or in an immediately adjacent village;
- villages with *some access*: villages with aid posts, villages adjacent to villages with aid posts, or with good road access to a Health Sub-Centre or Health Centre;
- villages with *fair access*: villages adjacent to a Health Sub-Centre or Health Centre.

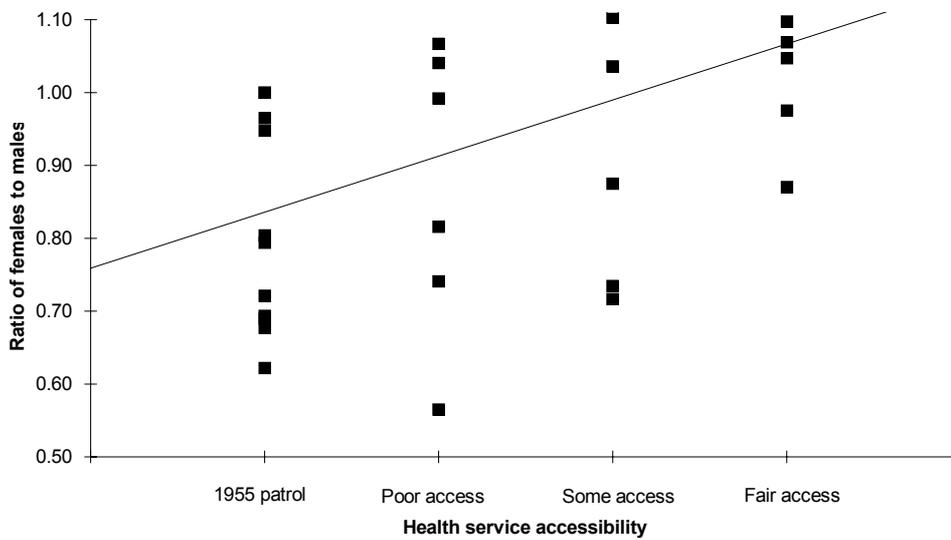
In practical terms, ‘poor access’ means that sick people cannot get chloroquin easily or have sores treated; mothers frequently give birth unassisted and essentially receive no perinatal care. ‘Some access’ means that chloroquin is available when the aid post is functioning properly, sores can be treated, but that birth assistance and perinatal care may not be available. ‘Fair access’ means that birth assistance and perinatal care is expected to be available, as is the immunisation of children.

With this level of detail, the positive relationship between medical care and the female-to-male ratio is unambiguous and striking. In 1955, as in other newly contacted areas, it is perhaps likely, but not definite, that some women and girls were hidden from patrol officers. At any rate, the ratio of 0.82 for the sample is below a modern ‘bad’ rate by a considerable margin.

In 1990, the principal difference is between villages with no health services to speak of, and those with at least aid posts. The former are badly off, with a ratio of 0.91. Fig. 3 shows that this represents a deficit of some 64 ‘missing’ females, in relation to a benchmark ratio of 1.02.

Is the 1.02 benchmark appropriate? It does seem appropriate for the Awin villages; as it happens, this is the exact ratio seen in Awin villages close to health facilities with at least a nursing sister on duty (one had a doctor). This level of care is not always perfect—no one will claim that a rural Health Centre can save every life—but it is above all where the benefits of mother-child health

(MCH) clinics begin to be felt. By contrast, the neglected villages continue to suffer with health intervention at levels not far above those seen at contact.



Sample	Villages	M	F	Totals	Ratio	'Missing' females
1955 patrol	12	459	375	834	0.82	93
Poor access	6	585	533	1118	0.91	64
Some access	8	558	563	1121	1.01	6
Fair access	6	612	624	1236	1.02	0

Figure 3. Female-to-male ratios in a sample of West Awin villages.

Note: some graphed data points overlap.

Health and well-being as reported to the anthropologist

The anthropologist typically wears several caps at once. While mindful of the kinds of finding just noted, it is the anthropologist's job to pursue inquiries that apparently lie along another track entirely. Among these are what people say, feel or rationalise about their state of health, perhaps better expressed as 'well-being'.

In the field we were not necessarily pressed with accounts specifically of health or ill-health, but we constantly came up against issues where it was not difficult to find health implications. The quotation in the section heading, is taken from a letter handed to the team by irate Yonggom villagers. According to the writers, environmental impacts along the lower Ok Tedi were the cause of a long list of physical complaints, among which they included shortness of breath ('short wind'), tropical ulcers, sunburn, and illness from what they saw as contaminated rain ('rain makes us sick'). The people, they said, were 'being sick almost every now and then'.

There is enormous difficulty in reconciling accounts of this type with specific ailments. This is not to dismiss the health problems of Yongsoms, Awins and Ningerums—on the contrary, the foregoing section suggests that the conditions of health in their area are bad to appallingly bad. However, it is enough to

indicate that what is said is mediated by cultural factors and ways of expressing things.

One of us, Kirsch, proposed a way of understanding such accounts. This is through a 'model of misfortune' which people apply to a given situation which is causing them grief. The comparison was made with sorcery accusations, where a sickness or death causes people to diagnose its cause, identify an individual with the alleged intent to wrong the victim, and then lay an accusation of sorcery.

Kirsch's informants made a clear distinction between harm attributed to sorcery and harm attributed to mine impacts, but there were situations of doubt. In a 1988 case of drowning, it was at first thought that the canoe carrying the three victims overturned as a result of the vengeful anger of someone earlier harmed by the sons of one of the victims. A sum of compensation was even paid to the man's family. By 1992, though, this earlier opinion had been revised, because it was now felt that blame for the physical cause of drowning, which occurred as the canoe overturned when negotiating a strong current at the D'Albertis Junction, should lie with OTML. River dwellers are in agreement today that the lower Ok Tedi is more dangerous for canoe travel than formerly, because of cumulative alterations to the shape of the channel caused by riverbed aggradation.

In some of Kirsch's Yonggom cases a direct attribution of harm is made, such as in cases of alleged poisoning by 'copper *marasin*', which literally translates as 'tailings chemical'; the more specific meaning is 'poisonous trace contaminant'. Others demonstrate the distinction between proximate causes of death or injury—a broken leg, a drowning, death from assault sorcery—and culpable causes, which are generally explanations of why the victim came to be exposed to the dangerous situation. Either way, the logic follows what Kirsch terms the Yonggom 'model of misfortune'; that is, illnesses and accidents are brought on by the actions of persons, not by the product of chance and natural forces alone.

This is easy to contrast with the Western model of empiricism. The Yonggom are biased towards uncovering evidence that will lead to the discovery of who is responsible, and tend to discount the value of searching for further physical clues. The empiricist is trained to be biased towards an exhaustive pursuit of the physical chains of causation, and tends to discount the value and relevance of questions of human intent or intervention until a much fuller physical explanation is arrived at.

Verdict

A wide and seemingly unbreachable gulf separates the positions of the Ok Tedi villager and the Western-trained empiricist. On the one hand, for villagers living next to the Ok Tedi river 'copper *marasin*' (and the river's sediment load) is the smoking gun that accounts for the lack of well-being, and the one holding the gun is OTML. On the other hand, the empiricist is confident that further enquiries will reveal that their symptoms and misfortunes actually stem from a

wide range of problems, which may or may not be linked with one another, may or may not be the result of negligence, and whose relationship with mine discharges may or may not be established.

Both positions as just stated are inappropriate *as guides for what to do next*. The first is inappropriate because many alternative possibilities have been overlooked. But the second is also inappropriate because by the time flawless answers have been obtained, most of the original complainants will be dead, if the high levels of mortality¹ hinted at by our demographic findings are true.

There is, however, a means of resolution. This for the two sides to work together immediately to isolate and deal with mutually digestible parts of the overall problem one by one. Community health issues must be at the forefront of this joint effort. Unfortunately, information to August 1993 was that organisational problems and proposals in respect of the sharing responsibilities for health service delivery are far from being resolved. This information may now be out of date.

¹ Figures for infant mortality can generally be arrived at through a mixture of reporting techniques, but it requires very careful demographic work to determine mortality rates and life expectancies at older ages, say, at 30, 40 and 50 years of age. But observation in the Ningerum and Awin areas, with an eye to this, showed a depressed number of men and women aged over 55 years, and no-one at all—that I have yet discovered—over 75 years of age. In day-to-day terms this means that not many adults in their 30s have living parents. This contrasts with the non-malarial highlands where 30 year-olds have a good chance of having living *grandparents*, people of 75-85 years of age are the still active aged, and those of 85-95 years are the frail aged..

IV

MATTERS OF PROVINCIAL MINE BENEFITS: GETTING ... AND SPENDING?

The question

In his recent review of developmental aspects of the Ok Tedi project, Jackson noted that financial support from the national government to the Fly River Provincial Government rose from 2.9% of the income for all provinces in 1984 to 7.7% in 1991, to give the FRPG the highest per capita funding of any province in Papua New Guinea. This rise is a direct consequence of the extra revenues generated by the Ok Tedi mine, generally termed 'windfall income'.

See R. Jackson, 'Cracked Pot', p. 59.

In looking at social development issues, the question we have faced is this: has the province been successful in spending its windfall income?

What we found

The first problem was to verify Jackson's arithmetic. Had he quoted inaccurate figures? Had he miscalculated in allowing for CPI adjustments or population comparisons? Our figures differ slightly from Jackson's but convincingly confirm the trend he has picked out (Table 2). By 1992, only Enga, a far more populous mining province, edged out Western for the top spot in the provincial rankings of *overall* funding (Enga's figure for 1992 was K24,711,200). The giant Morobe Province, usually holding the top ranking on other measures, received a few hundred thousand kina less (K23,530,700 in 1992).

	1984 (1984 Kina)	1984 (1991 Kina)	1992 (1991 Kina)
Western Province	K8,266,904	K11,821,673	K23,948,200
Other provinces (excl. NSP, NCD)	K190,186,170	K271,966,223	K312,865,500
Western Province, per capita	K96	K137	K208
Other provinces, per capita	K64	K92	K90

Table 2. Western Province (Department of Western + Fly River Provincial Government): all external funding.

The story of how this high level of funding came about is not a simple one. Royalties make up only a part of the extra money, just under K2m in 1992. A good historical account of this provincial government has yet to be written, but a version that will do justice to the subject must account for the extraordinary proliferation of income sources. It is not far from the truth to say that each of the various crises to have befallen the province over the last decade has been resolved by the approval, by cabinet, of a new and 'special' budget line, invariably described as top-up funds for an underdeveloped area. This has yet to

be matched by a compensatory restructuring of the province's other accounts. At any rate the result is an unusual number of these special lines: Kiunga-Lake Murray Agreement funds, North and South Fly Development Programme funds, Special Support Grant funds, Border Development grants, and so on.

Having satisfied ourselves that Western Province really is financially advantaged by the presence of Ok Tedi mine, in comparison with other provinces in Papua New Guinea, the next problem was to determine what the province has to show for its high income. This was by no means easy and we do not claim to have a perfectly accurate answer.

An analysis of the 1992 provincial budget showed that about K7.6m was available for capital expenditure and development grants. (The remainder covered recurrent costs and the public service budget.) This could be further broken down into three approximately equal parts for village level grants, road and airstrip works, and other building construction (Figure 4).

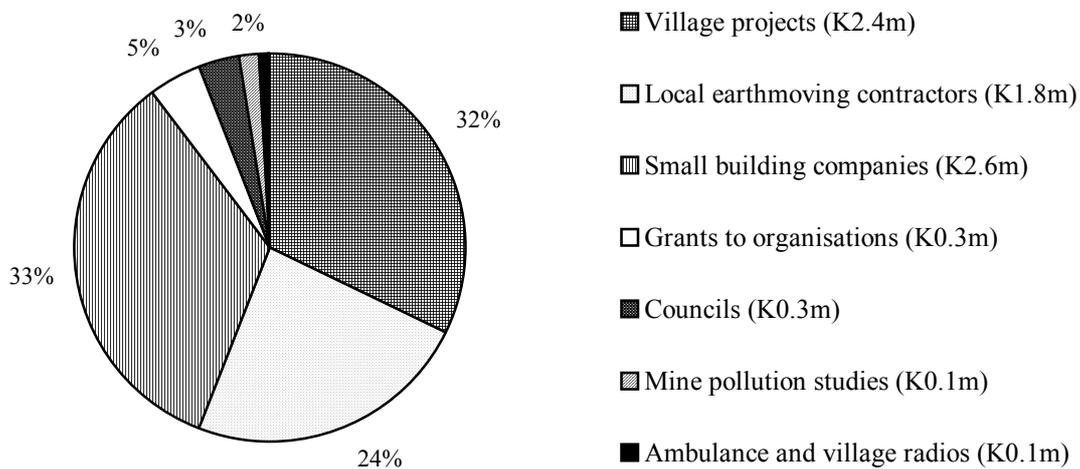


Figure 4. Breakdown of 1992 budget funds for capital expenditure and development grants. Total, K7.6m

Spending on village level projects

It is an article of faith in reputable development philosophies that project funds are most effectively spent at village level. Certainly, aid donors like to see their dollars to be turned into seeds, vaccine shots and clean water supplies that 'small' people can benefit from. This sector has been very successful in garnering resources to itself in Western Province; it is not unempowered.

Unfortunately, we found much of the money dispensed in the form of small grants to village business, womens' and youth groups with—at best—uneven supervision from extension workers. At worst, there was no supervision at all. For example, in 1991, K1.1m was handed out in South Fly to a prepared list of village groups at a single meeting.

Concrete examples of inappropriate village-level spending came in the form of livestock projects where repeated grants of K1000 to K2000 were obtained to buy consumable items, such as stockfeed, and not reimbursed out of sales. At one chicken project funded in this way in the Kiunga District, it was possible to calculate that the birds received a K5.00 a head subsidy—more than the retail price of a store-bought chicken.

Anonymously referred to as the 'Kaekae chicken project', after a local river name.

Another case concerned the construction of a home-made airstrip at a border village. Sums of K2000 and K3000 were paid for work on this project in successive years—but with little likelihood of the Department of Civil Aviation would give approval for it to be operated, even if sufficient work were actually done to prepare the site (with hand tools). Villages did build their own airstrips in the 1960s, but money should not be spent on unplanned and unserviced strips in the 1990s. In truth, grants of this nature are dispensed for political support in the recipient villages.

The sums of money in question were not large by the standards of conventional rural credit schemes, but they were large in relation to the sums available to district-based extension workers and, because of this, they caused significant distortions in the hierarchy of administration in the province. A very sore point was the non-payment of the grants to councils, the official and elected third tier of government, in 1992. For want of their K25,000 a year operating budgets, all six North Fly councils closed down for most of the year while at the same time unelected constituency committees (with the exception of the provincial members whose allocations of money were dispensed) sat to divide up K40,000 electorate development funds. At this time, the national EDF scheme was set to be abolished; instead, by 1994 most provincial governments had been suspended, including Fly River, and national EDF allocations raised to K300,000. I have no evidence that extension officers and councils—which hopefully *have* now been paid—have fared any differently than previously.

Construction projects

Among several large construction projects mooted in North Fly in recent years, two concern the Ok Tedi impact area: a road from Ok Menga to Olsobip and an Ok Tedi bridge.

An engineering firm was commissioned to write a feasibility study for the Ok Menga road and a provisional costing of K14.4m was given. It is possible that this could be trimmed somewhat, but it is unlikely that a major reduction could be achieved, given that the road must find a way to cross extremely rugged terrain. Planners must decide whether the investment could be justified in terms of both the number of people that the road could service and the cost of maintenance in future years.

It may be that, as most of the inexpensive roads have already been built in Papua New Guinea, the only ones left are expensive ones, and it is simply a matter of equity to build them, however much the cost. But, in practice, the funds are not available for this road.

All the same, about K100,000 became available in 1991 for work on a pilot track for the 'Ok Menga-Olsobip road', and work began. A visit to the site in 1992 showed that the track had penetrated approximately 1.5km towards old Migalsimbip up extremely steep gradients. It was passable by four-wheel-drive only as far as the 1km mark. This road was not planned by provincial authorities (or the Trust) and has subsequently received no additional funds.

What has been achieved? Firstly, it is misleading to say that 1.5km of the 'Olsobip' road has been built, because the track starts off westwards in a detour to old Migalsimbip where the planned route headed eastwards. And as none of the possible routes has been surveyed, as recommended, the only valid comment is that heading blind into the bush risks meeting against impassable obstacles or creating impossibly steep grades. Thus not much has been achieved so far, beyond letting a contract to a road contractor.

Construction of an Ok Tedi bridge at or below Ningerum, for which the most recent costing is in the vicinity of K1.5m, is an achievable project given present resources and would provide much needed road access, once the linking roads were built, to the 'Alice' Ningerum and the northern Yonggom people. Several sites have been selected with the preferred choice being at the existing ferry site north of Ningerum station. By 1992, it had been proposed that the Lower Ok Tedi-Fly River Development Trust should build the bridge in cooperation with the provincial Department of Works. Nothing has been started, however, mainly because of a landowner dispute.

Other road building

A wide range of secondary roads was approved for funding in the 1992 budget, mainly in North Fly. If completed, they would provide the area with an ambitious network of roads linking almost all but solitary villages with the Tabubil-Kiunga Highway.

Unfortunately, the success of the construction programme is extremely patchy. The small contractors are not well organised and, realistically, cannot be left to work unsupervised for, as Ningerum councillors observed in the minutes of one meeting, 'the contract operators ... sometimes don't attend work and claim money only'. In one case seen in 1992, the contractor re-gravelled an already gravelled section, put in spade-dug side drains, but did not gravel or build up causeways across the swampy sections of a road or build durable culverts. The result is K30,000 spent on a road that is in much the same state it was before.

On the other hand, a new feeder road being built north from Ralengre (see above, p. 6) has been constructed to a high standard and will eventually link up with a cluster of quite populous, but disadvantaged villages around Haewenai. It is clearly an intractable problem that well-finished roads like this one costs considerable sums of money out of a budget of finite size and the norm is for many roads to be half-built all over the area. This should be solved by the careful prioritizing of road projects according to some long-term and stable plan. In 1992, no such plan could be seen to exist and the majority of road allocations were evidently made on a political whim.

Strengthening of existing institutions

Various government agencies appear to lurch from one crisis to another in Western Province. This is excusable when there are genuinely no funds. It is not acceptable without a very convincing explanation when a province is doing much better than the average in financial terms. Sadly, the health sector seems to be hardest hit most regularly. Two of us, King and myself, visited Health Sub-Centres in North Fly that did not have a nursing sister on the staff strength. At Haewenai, I was told this was because of the inadequacy of the housing provided. At this Sub-Centre, the labour ward had several in-patients, but no trained birth attendant or midwife to assist with deliveries. (My field guide, a nurse trainee, scrubbed up and delivered a baby within an hour of our arrival at Haewenai.) Conversations with medical staff at Tabubil and Rumginai added much more detail on the failings of the provincial health infrastructure. It was unfortunate, then, to have observed very little effort being made at the provincial government level to take matters in hand and to deploy some of the mining income to make the infrastructure that already existed actually work as intended.

The 'collapse' of the Daru hospital—over basically the same issues—made headlines in the Papua New Guinea Post-Courier newspaper in 1993.

Verdict

The question posed was whether there was anything of substance to show for the increased levels of spending available to the province. The answer, sadly, was very little indeed in 1992, all things considered. In this we differ with Jackson's comment of the province that 'to date it has not known what to do with its new found wealth'. On the contrary, many people have proved only too willing to find something to do with the 'wealth', starting with the publicly well-known case of the K3.1m 1990 Special Support Grant cheque presented to the Fly River Provincial Government by the Deputy Prime Minister and witnessed by many councillors and other village leaders at a ceremony in Tabubil. It is notorious that the money has never been seen in a budget in Western Province. It is equally true that the 'spending disease' extends right down to grass-roots level, with the smallest community joining in the clamour for its own 'project' which, as described here, is often only a front for direct income.

Jackson, Cracked Pot, p. 62.

I should say do not believe the successful bidders for village-level and small construction projects *intend* to misappropriate the money awarded them, or that technically speaking, that they do so, but the eventual effect is little different given the lack of supervision of the way in which the money is spent. Cash is certainly put in the hands of villagers in North Fly, but all evidence to 1992 pointed to the conclusion that *no sustainable economic activity* was being generated by this highly political action.

V

DISCUSSION

The limitations of our study

The work we have done to date presents a very partial picture of the state of development in North Fly. We are limited in knowing much less about the small business sector than we would like, particularly in the area of sub-contracting for the mine and its infrastructure. We would like to have carried out more formal (but more time-consuming) studies of environmental impacts on the subsistence system and on the human ecology of the lowland rainforest.

At the same time, some of the things we have looked into set their own limits of knowability. For example, if we find that certain posts made no statistical returns (as we did), there is a real limit to what more we can say about them. Andrew Axline, a specialist on Papua New Guinea's provincial government system, has commented that policy decisions in the worst performing provincial governments are 'limited to the adoption of a provincial budget'. This described Western Province aptly in 1992 (as it did when Axline wrote in the mid-1980s). It means that we were limited in the way we could investigate policy and planning functions, except to say that they did not exist, or if they did, that not much heed was being paid of them.

Axline, 'Development and decentralisation...' p. 162.

Notable points we have not presented here

Fuller discussions of the topics summarised here are presented in our working reports. However, reasons of brevity have precluded inclusion of our treatment of employment and economic activity, including rubber, fish and food crop marketing, and longer arguments concerning compensation issues and the impacts of flood-dumped mine wastes in the lower Ok Tedi. In both of the latter cases, further field investigations, including finer scale social mapping of the affected areas, are required before a useful account can be given.

Timing has also affected what we have been able to consider. A case in point concerns rubber. In 1992, rubber tapping was essentially nil in North Fly; no member of the study team witnessed a grower tapping a rubber tree, though we did see cup-lump rubber stock-piled at village plantations. In 1993, however, a joint venture got underway between the Progress Company of Kiunga and the Lower Ok Tedi-Fly River Development Trust and by the end of the year several hundred tonnes of cup-lump rubber had been purchased in anticipation of the opening of a processing factory in Kiunga. We had predicted no increase in production without a 10t-15t increase in the buying price, assuming no change in the behaviour of the buyer, which historically had been even more sensitive to price fluctuations than had the growers. In fact a huge increase in output was achieved with a 3t-4t increase coupled with a new perception that the Progress Company would come and buy everything produced. It would be appropriate to re-examine the performance of the rubber industry at a future date.

The position of the Lower Ok Tedi-Fly River Development Trust

The Lower Ok Tedi-Fly River Development Trust was established in 1989 to bring specific benefits directly to villages in the river corridor between the mine site and the estuary of the Fly River. Part of our brief has been to comment on its usefulness or effectiveness in doing this. In practice, we have not commented much on Trust activities, partly because the Trust had not been operating for very long at the time of our last period of fieldwork in mid-1992.

Another line of argument runs as follows. A minimalist position, in relation to mine benefits, is that the State should tax mine operators and use the money to provide social services and infrastructure improvements; mine operators should not directly provide benefits. Naturally, it is doubtful whether this is strictly followed anywhere in the world, but if this *did* accurately portray the situation in Western Province, the Trust would be seen as unnecessary, and it could be seen as meddling. On the other hand, if the State fails to tax and spend—or at least, if it fails to spend—the architects of the Trust would be justified in thinking they should ‘step into the breach’ to provide villagers with something that they can see and hold onto.

The nearest model for this situation is to say that the relation between the Trust and provincial spending is a *zero-sum game*; that is, what one party does, the other will not and vice versa. Following this logic, the Trust would be most successful if it did nothing at all. Conversely, if the Trust was found to be becoming more interventionist over time, this would point towards a worrisome unwillingness on the part of the State to meet its obligations to provide services in rural areas.

What we hope to achieve

Earlier I gave a definition of the purpose of (physical) environmental monitoring, but avoided giving a precise definition of what social monitoring should do. I can now say that our aim is to be able to ‘tell the Ok Tedi story’ through the application of all our various methods and techniques of analysis and, by being as investigative as possible, to search for turning points in the development of a project.

Brief statements in the national budget documentation (originating with the Department of Finance and Planning) speak of the need to ‘mitigate social impacts’ at major resource projects, but this must be seen in as broad a context as possible, in our opinion.

The label ‘the Ok Tedi story’, like ‘the Panguna story’ or ‘the Porgera story’, may well have a historical ring to it, but this not unintentional: it is said that to dismiss history is to be condemned to repeat it. On a policy level, it is simply a matter of getting the record straight before adopting a particular mode of response or making important decisions. Our goal is to do this from our special vantage point as area specialists and ethnographers—people who ask questions in villages.

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