

**DEVELOPMENT OR DETERIORATION?
SOCIO-ECONOMIC CHANGE
IN THE MOREHEAD DISTRICT**

OK-FLY SOCIAL MONITORING PROJECT REPORT No. 12

for Ok Tedi Mining Limited

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October 1995
reprinted October 2004

PREFACE

Fieldwork for this report was undertaken for OTML's Environment Department in a one week visit by Tapari and myself to Suki in August 1994. This follows almost twenty years of investigation by Tapari in the problems of development in Western Province, beginning with his contribution to the National Planning Office's pioneer pre-mine *Kiunga development study* (Jackson 1977; Tapari 1977), continuing a decade later with his Morehead District study (Tapari 1988), and now the present work which is a brief update on Morehead as it is today.

This long history of involvement with Western Province in general, and the Ok Tedi project in particular, gives Tapari's work a unique continuity in social issues research in post-Independence Papua New Guinea. It is a constant criticism in development studies that 'action research' lacks the time depth to give a meaningful picture of change in a culturally unfamiliar region. Here the methodological boot is on the other foot for once—and Tapari's title and mournful conclusion leave us in no doubt that the central question is not whether the author has a handle on change, but whether change is detectable at all in the study area.

This volume is the twelfth in a series of reports for the Ok-Fly Social Monitoring Project. Colin Filer's *Baseline documentation. OFSMP Report No. 1* and my own *The Ningerum LGC area. OFSMP Report No. 2*, appeared in 1991. My *Advance report summary for Ningerum-Awin area study. OFSMP Report No. 3*, David King's *Statistical geography of the Fly River Development Trust. OFSMP Report No. 4*, and the two major studies from the 1992 fieldwork, Stuart Kirsch's *The Yonggom people of the Ok Tedi and Moian Census Divisions: an area study. OFSMP Report No. 5* and my *Development in the North Fly and Ningerum-Awin area study. OFSMP Report No. 6*, were completed in 1993.

In 1993, I gave a precis of our findings to date in *Social monitoring at the Ok Tedi project. Summary report to mid-1993. OFSMP Report No. 7* and, in 1995, *Interim findings for 1994. OFSMP Report No. 8*. David Lawrence's *Lower Fly area study OFSMP Report No. 9* appeared in May 1995, while my *Middle Fly And North Morehead Area Study OFSMP Report No. 10* and David King's *Socio-economic surveys of Trust villages. OFSMP Report No. 11* appear concurrently with this volume.

John Burton
Canberra

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Map 1. Morehead-Woroi Road

Introduction

This is a review of my study on socio-economic change conducted in the Morehead District during the early 1980s (Tapari 1988). The review is timely for a number of reasons. Firstly, it is an attempt to assess socio-economic transformation in the District over a period of one decade; and secondly, this report examines changes brought about by the presence of the Ok Tedi mine with particular reference to the Suki area. This objective is particularly important in the sense that Suki falls along the main shipping route used by Ok Tedi. Thus the benefits received from areas integration into the shipping service would seem to be more pronounced than those villages which fall further away from the Fly River. Furthermore, part of the Suki area is also included in the Ok Tedi Trust.

The 1988 study does not contain a very comprehensive analysis of socio-economic development in the Suki area upon which any detailed assessment of changes in the production and village economies can be made. Despite the limited base-line information which is available on Suki for making any effective comparison of changes taking place during a period of one decade, there is some evidence to show that rural development has taken place in the area. Some of these changes are discussed in the relevant sections of this report.

Sources of information

The purpose of this study is to examine the development of socio-economic infrastructure in the Morehead District. Some of the main areas of discussion include small-scale business enterprises, cash crop production activities and other development facilities which help foster rural change. Much of what is contained in the report comes from four sources. They include a review of data collected for the study conducted in the early 1980s and how that information compares with the situation in 1995. Secondly, my own personal field impressions and experiences of development activities in the area also significantly contribute towards assessing the changes. Thirdly, additional information was collected from other Morehead people living and working in Port Moresby. They were interviewed and were my resource persons. They know best about their own local communities and therefore a 'story is told' from an inside point of view.

Geography of settlement

Morehead District has a land area of around 13,000 square kilometres. In 1990 the District had a total population of 7,892 people (Table 1). The District is divided into three main Census Divisions; Bensbach CD, Transfly CD and Saru CD, which contains the Suki villages (Map 1). As Table 1 shows population is concentrated in Saru and the Transfly Census Divisions while Bensbach area is relatively sparsely populated.

A brief description regarding settlement geography of the Morehead District is included in Tapari (1988). Generally most villages in the District are nucleated and distances between neighbouring villages vary. Some villages are an agglomeration of smaller settlements while others have disintegrated. In some, village names have changed. This is

because people have relocated their places of residence to new sites or alternatively settlers use traditional names to re-enforce their customary land linkages.

An original village of Wando in Bensbach, for example, is now disintegrated into five different small settlements. They include Balamuk, Wando, Torwaia, Debanthepeth and Korombo. This trend of village relocation had been noted by Ranck and Tapari (1984). A reason given for a larger part of population to be absent from Wando relates to establishments of the Wild-Life station at Balamuk, Bensbach Wild-Life Lodge at Marumbwe and Wando Patrol Post at Debanthepeth in the late 1970s and early 1980s. Local villagers worked in these stations as casual labourers. Since they worked in these stations the labourers found it more convenient to live close to the place of work.

Census Division	Males	Females	Total	Percentage
Transfly	1575	1508	3083	39.1
Bensbach	725	757	1482	18.8
Saru	1676	1651	3327	42.1
Morehead District	3976	3916	7892	100.0

Table 1. Population of the Morehead District, 1990

Source: National Statistical Office (1993:10).

Thus the establishment of settlements at Debanthepeth and Korombo is attributed to this reason. On the other hand, Eniyawa (Duru) and Mukufideben (Serki) in Suki are examples of new village names which have been given to them.

Experiences of village relocations, for them to disintegrate, agglomerate and people to give them new names can be explained both in social and economic terms. It is possible that in future some villages along the Fly River are likely to be relocated to new sites and tap business opportunities created by a regular shipping service to meet the demand of the mining operation. To some extent this regular shipping service has already paved a way for people in Suki to tap this opportunity. This opportunity has led to the establishment of small-scale business enterprises such as village trade stores. Their continued success and survival, particularly in the Suki area, is attributed to this reliable shipping service.

Disputes on land over the ownership of main resource areas such as using swamps or wetlands for hunting crocodiles, hunting wild animals for food and harvesting forestry resources for housing construction and other household needs of villagers cannot be overlooked in an attempt to cite other possible reasons for relocating places of residence. This situation has been observed in Bensbach in the early 1990s. The situation in Suki cannot be clearly defined and fully assessed because of a lack of my personal knowledge of the area. However, I do believe that such land disputes exist in Suki. This was indicated by some informants during our field survey in late 1994.

As noted earlier, a pattern of settlement distribution in the Morehead District is partly closely associated with social problems. Also equally important ingredient for villagers to change location of villages is a desire for them to be integrated into the monetised economy. This is to say that once a road is established villagers in the area of influence will move to settle along it. However, any economic reasons for relocating villages to the

main road in the Morehead District has not been observed upon which any definite conclusions can be drawn. In the past some villages have been relocated and established along the Morehead-Bensbach road but these moves have been independent of any economic motivation mentioned here. Villages such as Iokwa (now Sapes) and Wemenever are two examples in the case of the Bensbach area. In the case of the Aramba villages, people from Meru (Sirisa) moved to Kiriwo after a road linking the villages of Uparua-Setavi-Kiriwo-Goe and Gwaku with Morehead government station was established. However, due to land problems people from Meru who lived at Kiriwo moved back again to their original village to settle (Richard Mbeakit, personal communication, 1995).

Rural development: a villager's perspective

The idea of rural development for a Morehead villager means an ownership of capital resources which are used to generate further capital or income. Ownership of outboard motors used for hire purposes, operating small-scale business enterprises (for example, trade stores), farming crocodiles in captivity, cash crop ventures such as production of rubber with available market outlets to sell products are seen by local villagers as creating paths to rural prosperity. In addition, a physical presence of other socio-economic infrastructure such as health centres, schools, water supply systems (water tanks and wells), and access to all-weather roads in remote villages will make them remark that rural development is taking place in their area.

Most small-scale business enterprises in the District are usually family-owned which revolve around kinship ties and customary clan groups. An element of self-respect and trust is embodied in such business enterprises which are operated under the umbrella of family or clan groups than to have them operated on a communal basis. This was one of the main contributing factors which led to a demise of co-operative movement in the District during late 1960s.

The Morehead Buyers Society (MBS) sold basic consumer goods and bought raw salted crocodile skins from the villagers and drawing its membership from all the three Census Divisions is the case in point. This Society was later amalgamated with other co-operative movements in the province. It was known as the Transfly Co-operative Society. However, since the demise of the MBS, no business enterprise in the Morehead District has ever again operated on a communal basis.

The 1995 Budget speech by the Fly River Provincial Government Finance Minister clearly stated that rural development is a priority area of development given the situation that majority of the people live in the rural areas. He stated thus:

‘This budget is more inclined towards rural development since the majority of our people live in the rural villages. [In this regard] infrastructure development such as road network development, port development, aerodrome development [should be seen as a basis for] delivery of basic government services [and linking of] rural villages within the District centres’ (Subam 1995:4).

This statement illustrates the importance of rural development as advocated by the provincial government (but see below, p. 17). As noted above, this is to be achieved through the development of transport and other related infrastructure. Thus development expenditure for 1995 on rural development shows that it was the third most important

item of expenditure (10.4 percent), even though in 1993 and 1994 no reference was made to this area. This information is contained in both Table 2 and Figure 1.

Transport infrastructure.

A motivation for rural villagers to be integrated into the cash economy depends on good transport and marketing infrastructure in the District. With regard to road already a major network exists from Morehead which links up with Wipim in the Daru District. Some segments of this road have, however, lacked regular maintenance. This is the Woroi-Morehead road (Map 1). If properly maintained this road has the potential to create opportunities for establishing small-scale business enterprises. People from Morehead District commuting to Daru to visit friends, do shopping or intending to travel elsewhere out of Daru by air have made use of it in the recent past.

It costs about K75.00 per day to hire a vehicle from Morehead Government station to Woroi (present river port). However, a daily rate advertised for hire from Wipim by one operator was K800.00 to Bensbach. This is highly expensive. From Woroi/Daru a regular boat service operates at a passenger rate of K5.00 per person. A flat rate for hire of a ferry service can vary between K50.00 to K70.00.

The existence of the present Woroi-Morehead road is going to induce villagers to participate in the cash economy. This activity is almost non-existent in some of the Transfly villages. Some of the potential areas where local people are likely to be positively engaged include the operation of licensed vehicles to carry passengers between Wipim and Morehead-Bensbach areas. Already this activity is under way. I know of a local community school teacher from Dimisisi village, two operators from Bensbach, one from Morehead Government station and two operators from Wipim who are already tapping this potential. The second area where local people could venture into includes the establishment of a rest house at Woroi. This rest house would cater for travellers who come from quite far distances such as Bensbach or the Transfly areas. A reasonable fee charged for its use could generate small cash in hand to the operators and should be considered as one possible area for future development.

The other positive impact from this road link is likely to accrue to the operators of small-scale trade stores. This benefit will be realised in the form of reduced transport costs with movement of bulk cargo. They would be transporting store goods at a much cheaper and reduced freight rates. Per unit kilo of cargo moved to various destinations along the highway would be cheaper than if they were to be flown by air to places in the Bensbach and the Morehead areas. The observation in the 1980s that 'people most affected by the increase in already high transport rates ... have been small-scale businessmen ...' (Tapari 1988:17) in this instance will be minimised. This is because the Woroi-Morehead road would help rescue this difficulty. A diversion in the mode of transport from air to road travel would be a major cost saving for many rural commuters or small-scale business operators, and especially if group travelling is to be encouraged.

My experience in late 1994 showed that during the dry season many people were travelling by road than air, certainly a positive indication that this trend is likely to continue in the near future. The side effect in the choice for people to travel on road was

that only few passengers flew by Sunwest to and from centres like Bensbach and Morehead. However, during the wet season most people choose to go by air.

The other area which has effectively linked and encouraged the villagers to participate in the cash economy relates to that segment of road which links the Bensbach area with that of Sotar border station in Irian Jaya (Figure 1). Presently, local villagers use this road. They trade various fish and forestry products and purchase basic consumer goods from Sotar. The local people trade these valuable resources when they visit Sotar under normal traditional crossing arrangements. Villagers from Bondabol, Balamuk, Wando, Korombo, Mengete, Kandarisa, Weam and Wereave regularly visit Sotar to purchase basic consumer goods not readily available in the local trade stores. Goods such as cigarettes, packets of dried betelnuts, soap, matches, bicycle parts, parts for Toyota trucks, motor bike parts and petrol are some of the main items which are bought from Sotar or Merauke town in Irian Jaya.

Table 2. Summary of Expenditure, Fly River Provincial Government, 1993-1995

Figure 1. Summary of Expenditure, Fly River Provincial Government, 1993-1995

The villagers have also begun to trade various fish, animal and forest products. Examples of fish products include sale of young live saratonga fish, shark fins and dorsals and barramundi guts. Deer antlers are also sold. Forestry products include wild nuts. These activities to many rural villagers in the border area where opportunities for any type of cash crop production and small-scale business ventures is limited have become a lucrative source of cash income. The relevant government departments, particularly the Wild-Life Department and the Department of Agriculture and Livestock (DAL), should further encourage villagers to tap these potentials. In the long term these small-scale business activities would meet the objective of border trade currently advocated by the National Government.

The problems of physical condition of rural roads discussed in my study (Tapari 1988:16) continue to exist in 1995. The 180 kilometre road referred to in the study (Woroi-Morehead-Sotar border station) has continued to lack any regular maintenance work in the recent past. A feasibility study by Frame Harvey West and Maso Consulting Engineers in 1995 indicated that it would cost K6,796,000 for total maintenance and related costs of the Oriomo-Malam road. This portion of the road length to which reference is made is about 80 kilometres.

The road is still awash with mud during wet season while bridges and culverts are prone to damage by bush fires during dry season. In addition, while this road is seen as one of limited economic value at least in the present time, its potential to induce and facilitate economic progress in the future cannot be under-estimated.

In my report I also make a mention of the role of horses in Bensbach in areas where road is impassable because of wet conditions (Tapari 1988:16). In early 1995, number of horses in Wando village alone increased to a total of around 30. They continue to play a vital role in moving goods and people between places, although a desire to develop or introduce horse-carts from neighbouring areas of Irian Jaya has not been encouraged at all.

Another means of moving people between centres is that of the use of bicycles. I do not make any reference to this in my early 1980s study. The use of bicycles by young villagers in the Morehead District is becoming handy and popular. However, difficulty of obtaining spare parts is a major problem. In addition, there are six tractors which provide useful service to the local community. One is currently held at Wando village which serves its own council ward. This is occasionally used to deliver water to many coastal villages and has been very useful in this regard. These villages have had water problems in the past due to very long dry spells as was experienced in 1994.

The villages of Weam, Kiriwo, Mukufideben and Mata also have a tractor each. These vehicles were purchased by members of both provincial and the national governments as part of their electoral contribution. In early 1995 an additional tractor was delivered to Mukufideben under the OTML Trust. The availability and use of these trucks have made it possible to move people and goods to remote areas of relevant council wards. In addition, vehicles and boats owned by the Bensbach Wild-Life Lodge are also occasionally used by local villagers in Bensbach when urgent needs arise. In this case the services of the Lodge have been particularly very helpful too.

Government services and administration in the District

It seems almost inevitable to charge that in the early 1990s Morehead District has experienced a declining prosperity in terms of providing useful government services to the rural villagers. Health clinic at Wando Patrol Post, for example, currently has no medical orderly. In early 1995 medical care in the village was provided by a retired medical orderly. New aid post building and a house were completed in 1994 but there is no one at the centre yet to provide basic medical service to the village people. A similar story is told of other health centres established at Wemenever and Bula villages in the Bensbach area. This problem is further compounded by a very chronic shortage of basic drugs despite the fact that incidence of TB and malaria cases in the area have been very common. In the last two years there have been a number of deaths in the villages which have been closely associated with these two diseases. The worst experience has been for some villagers to fly to Daru or even Port Moresby General Hospital for medical attention in 1994 and 1995. Some of these medical problems could have been attended to by those clinics established in the villages to which references have been made above. However, this has not been the case because of the reasons cited above.

Despite the fact that both the provincial and national members hold very senior ministerial portfolios at both levels of governments has not made Morehead District any better off than was the case a decade ago. Both members of provincial and national parliaments have yet to show to their own relevant electorates that with their presence in both governments socio-economic betterment of the rural majority is guaranteed. To what extent and when this will become a reality to an ordinary villager in the District is yet to be seen. My own personal experience travelling to villages within selected parts of the District during Christmas breaks, however, does not point to a bright future. Simple development projects the villagers have aspired for the last two decades has certainly not reached the majority. Water wells or tanks have not been installed in areas where water is a critical problem during the dry season. Coastal areas of the District such as Bula, Jarai, Tais and Mari fall in this category. The villages along the Morehead-Woroi road also face similar difficulties. Villages of Malam and Kwiwang are case in point.

Regular government extension work with regard to small-scale projects such as crocodile farming, a possible introduction of exotic crops for improving diets of local villagers, regular health extension services (nutrition, family planning, cleanliness of home environment) are some of the basic areas where government assistance has failed and terribly declined since the 1980s. Rural villagers regularly complain of a lack of these types of government extension work. Thus it is no wonder that opportunities for villagers to embark on any type of cash generating economic ventures anywhere in the District have almost been non-existent.

In addition, a major project in the District such as the Morehead High School has not even come into operation in the early 1990s, despite an initial cash payment to customary landowners a total of K26,000 in the early 1980s. Roads and various government facilities and houses have not been upgraded. Thus my definition of what is meant by a 'weak administrative structure' (Tapari 1988:17) in the Morehead District has certainly continued to be valid in early 1995. The advocacy for rural development in the District by leaders at multi-levels is really a planning rhetoric rather than a reality of what takes place in the District.

One of the most frustrating experiences too is the lack of funds to continually maintain government buildings. It only takes one to travel within the District to see for oneself the physical condition of some of the government buildings. They are in a state of deterioration. The case of the buildings at Balamuk Wild-Life station surely need repair. Lack of funds to maintain the station area has led to a regrowth of vegetation. Minimal government expenditure from provincial and national government sources is a major constraint towards effectively conducting any major repair work on socio-economic infrastructure in the District.

A lack of available funds in the early 1990s has appeared to be a major problem. This problem is further compounded by financial mismanagement at all levels of administration and a very poor institutional arrangement for delivering development to the village communities. When and who will maintain these buildings, for example, is a crucial question many villagers ask when they walk pass the station? With one Wild-Life Officer posted to look after the station in a very sensitive border zone with little financial support from both the provincial and national governments to carry out important official duties during the 1990s is a clear indication that this area has become more peripheral in terms of government attention. Certainly national governments publicity which relate to border problems with Irian Jaya in recent years to me does not appear significant. The station is now experiencing a decline in crucial government functions it performed in the past. Border liaison officer and policemen have been withdrawn from the area and the former relocated to Weam border station. This further adds to the problem of reliable communication (tele-radio) with Morehead or Daru. In addition to this, station's landing ground has also been closed for a long time now. The airstrip is now covered with anthills and a government station which was once the centre of the national governments focus in terms of administering border problems has declined in its importance.

At Balamuk the number of wild-life officers working with various projects such as crocodile farms, buying and selling of skins and live crocodiles, and management of wild-life resources such as deer farms have been completely abandoned and reduced to none. With these experiences in mind and a move by the national government to engage a New Zealand based company to re-introduce deer farming in Bensbach after two unsuccessful attempts in the 1980s (Tapari 1984 and 1990) could be a long way from receiving a favourable support by the landowners (see discussion, p. 14).

Socio-economic change

Rural development in the Morehead has been very limited. This is because the socio-economic infrastructure currently in existence and which can foster rural change in the District is poor. Opportunities for local villagers to venture into the cash economy are not very well developed. Burton's (1993:3) comment that Western Province '... languishes at the bottom of the pile in terms of many social development indicators' is a valid judgement. This observation certainly cannot be too far from the reality that exists in the Morehead District during the 1990s.

While there are certain limitations for establishing viable business enterprises, there are few areas where local people have attempted to venture into the cash economy. They include rubber production and the development of natural resources (deer and crocodiles). Trade stores are also a very common type of business enterprise in the

District, although many operate with limited stock. My observation in late 1994 indicated that the stores in the Suki area seem to be successfully operated than those which are currently in existence in the Transfly or the Bensbach areas. Cost factors (air freight rates), frequency and the reliability of shipping services to Morehead Government station, management skills and remoteness of some villages where the stores are located partly also explain for their limited success. References are made in the relevant sections of this discussion.

The discussion which follows is focused on some of the economic activities in which local villagers have been engaged and are regarded as 'viable' sources of income-generation ventures. Some of these activities in the selected areas of the District have prospered; others have stagnated, while most have declined. Some of the specific reasons are those listed above.

Nakaku rubber resettlement scheme

I looked at the Nakaku Rubber Resettlement Scheme in 1988, though my discussion was not especially detailed (Tapari 1988, 27-28). I found that settlers from the villages of Papaka, Duru (now Eniyawa), Aewa (includes Riti village), Gwibaku, Ibabi and Serki (now Mukufideben) had originally moved to the blocks to settle after the land had been purchased by the government in 1976. However, the situation had already changed by the time of my study. Members of some of the original villages were not living there any more. Many settlers from these villages had left.

Some settlers stopped tapping rubber as early as 1984. People give a number of reasons for this. They include land conflicts between the land-owners and the settlers, problems of transporting rubber bales to points of sale, a difficulty further compounded by the fact that price of rubber at that time was low (Jacob Itina, personal communication, 1994).

In 1987 DPI stopped buying rubber from the settlers. After that Nakaku Rubber Growers Association and Kiru Business Group became the main buyers of rubber. Then in 1994 Progress Company from Kiunga started buying from Nakaku with a consequence that some settlers were beginning to tap again. Together with a suitable buying agent operating from Kiunga, this in turn is likely to stimulate other growers to return.

By the time of our visit in August, 3½ tonnes of rubber were held in stock pile at Nakaku, but only 15 people were actively tapping rubber and most blocks were still overgrown. This is a decline from a total of 184 settlers who were involved in the resettlement scheme (Tapari 1989:27). One, hopefully temporary, obstacle was a shortage of rubber tapping cups, a recent order for 15,000 cups had not yet arrived at Nakaku (Idika Tamiapa, personal communication, 1994).

Bensbach Wild-Life Lodge

Since the establishment of this foreign-owned business enterprise in the mid-1970s, most villagers in the Bensbach area have been able to work here as casual labourers. The enterprise also has a sub-branch in Morehead with a trade store in place. It specialises in the sale of basic consumer goods and petrol. In the early 1990s the operation at Bensbach has expanded. It sells a variety of consumer goods at an inflated price. Some of the goods

it sells are bought from Irian Jaya at a cheap price, a further indication that trade across the border is going to expand.

People working for the Bensbach Wild-Life Lodge earn constant income. For the land-owners they receive a share of cash in hand through royalty payments when animals are harvested from their customary land. The 'greater part of such [income] earned is spent on the purchase of luxuries like beer, tobacco, tinned meat' and soap, a situation which has not changed much from my earlier field-work observation in the 1980s (Tapari 1988:24-25).

One of the more positive benefits resulting from local villagers' employment with the enterprise in the 1980s and early 1990s is that basic mechanic and driving skills have been picked up by the local villagers. A number of them are already using these basic skills in their own villages.

Natural resources development (crocodile and deer farms)

The statistical figures which relate to live crocodile farms in the District (Tapari 1988:45) appears that many of these farms have already been abandoned (Table 3). The main reason for their decline is that it is almost impracticable to operate a community-owned farm. Many villagers do not see operation of business ventures on a communal basis to be logically suitable. Problems of kinship and clan conflicts contribute to their declines.

Balamuk Government farm and Wando crocodile farms referred to in my study no longer exist. Thus my reference to the sale of live crocodiles and crocodile skins at Balamuk Wild-life station is irrelevant (Tapari 1988:46). This situation is also applicable to rest of the community farms in the Aramba and the Suki areas listed in the study. This means that Department of Wild-Life's intention to encourage more crocodile farms in the District as noted in the study is unrealistic. There has been no progress made since the early 1980s.

In early 1995 some land-owners of crocodile hunting swamps indicated that ponds or the breeding areas for crocodiles has already been disturbed by continuous bush fires and repeated disturbance on the natural environment by wild rusa deer. The consequence of such natural impact on the environment, particularly on the wetlands, has caused some ponds to dry up. This has affected the potential harvest of high number of live crocodiles by the land-owners in Bensbach, a direct relationship which is indicated for a low number of crocodile skin sellers at various market outlets.

Table 3. Crocodile farms in the Morehead District, 1980

Income received by local villagers in the Morehead District is directly related to the development of its natural resources. For example, royalties received from harvesting deer, fishing, hunting ducks and scenic photography by tourists in Bensbach has continued to funnel income to its land-owners. The sale of crocodile skins either from those caught in wild or from those farmed in captivity is also very lucrative source of income to most lagoon and river dwellers in the District. Two main crocodile farms are already well established in Riti and Sapuka villages in Suki. The owners of these farms also hold licenses for raw salted crocodile skins to be exported overseas. Both buyers live in these two villages. Neighbouring villagers of Riti and Sapuka sell their skins to these two establishments.

The name of the business group involved with purchase of crocodile skins at Sapuka is called BISOY (Baudi, Igina, Sirmaki and Yetri) Enterprises. It is a family-owned enterprise as the name suggests. The farm was established in 1987 with an initial capital injection of K1,115.00. These were contributions from the family members included in the Enterprise (Nelson Yetri, personal communication, 1995). It is therefore logical to own an enterprise on a family basis, centred on kinship and clan ties. This is because the land where resources are extracted from, as elsewhere in PNG, is owned through kinship and clan networks. This means that a possibility of any conflict arising from developing these resources in future is, therefore, minimised.

BISOY Enterprises is a revival of the Inaporoko (Sapuka) Community farm established in the early 1980s. It went into bankruptcy in 1983 because of bad management. The only difference with the present farm is that it is a family-owned business venture. The current manager of the BISOY Enterprises was one of the former executives of the defunct community farm. His past employment as secretary with the community farm has certainly provided him with relevant farm management skills to operate the current business enterprise.

In 1995 the farm had a total of 138 live crocodiles held in captivity. On average 30 crocodiles are slaughtered per year and revenue generated from the sale of their skins is K2,000.00. As noted earlier in the discussion, sellers of young live crocodiles and skins to these farms are hunters who come from the neighbouring villages around Sapuka and villages along the Fly River. It is regarded as one of the most successful small-scale crocodile farm projects in the Aramba area and certainly has funnelled some income to its clients.

In late 1994, however, BISOY Enterprise's license to trade skins had been with-held by the Department of Environment and Conservation (DEC) national office in Port Moresby. This made the BISOY Enterprises to have no license to trade crocodile skins locally or overseas. Therefore, the establishment currently sells its skins to SITA Trading located on Riti in Suki thus making SITA Trading in 1995 as the only crocodile skin buyer and an exporting agent in the Suki area, notwithstanding the fact that the Minister is a Suki himself. In this regard Aramba view this arrangement as a complete monopoly on crocodile skin buying industry. What they want to see take place instead is that Aramba people too must have a license to trade the skins. Thus the activity should not be in the hands of the Suki people alone (Richard Mbeakit, personal communication, 1995).

There are also a number of other smaller agents who buy crocodile skins from the hunters. Among others, two buyers come from Dimsisi village in the Transfly area of the

Morehead District (Wasang Baio, personal communication, 1995) and one also comes from Wando village in the Bensbach area. I did not discuss crocodile skin buyers in my 1980s study. This is because the main purchasers of skins at that time were the Department of Wild-Life and the Transfly Co-operative, both located at Balamuk in Bensbach and Morehead Government station respectively. This situation was particularly relevant in the case of the sellers who came from Bensbach and the Transfly areas, although in the case of Suki, Nakaku station served its clients. However, since the decline of services provided by these centres or organisations in the last few years, establishment of enterprises which buy crocodile skins can be regarded as a direct response to the demise of their activity in crocodile skin purchases. The emergence of local crocodile skin buyers in the last five years or so is an indication of involving village communities in promoting small-scale business enterprises.

On the other hand the development of rusa deer in Bensbach is seen as a major source of revenue for most land-owners although the propensity for them to earn income is largely dependent on tourists visiting the area. This activity is seasonal too and is usually at its peak during the dry season (Tapari 1988:32). This pattern is still prevalent in the 1990s and thus original information pertaining to this is reproduced in Figure 2.

As a Bensbach land-owner myself, I have to express scepticism at the recent announcement by the Minister for Environment and Conservation that deer farming will be re-introduced to the Bensbach area. Many people have complained of a lack of direct consultation by DEC with the land-owners and the village leaders.

I thought the call by the Minister to re-establish deer farming in Bensbach after consulting a New Zealand based firm in 1995 was a classic example of a top-down approach to natural resource development. There was a total absence of local participation in deciding upon the development of the rusa deer. Thus the idea of bottom-up planning and not involving rural villagers and those close to the village communities for natural resource development has not been fulfilled. It would have been only logical if local villagers were first approached and got them involved in the initial agreement and not consulted later. The experience in the late 1980s of a previous company (North Australia Meat Industries) not keeping up with its written promises (Tapari 1990) has been a real lesson for the villagers. In this regard bringing in another foreign company to farm rusa deer, develop other natural resources and advocate similar project benefits as those of NAMI in the 1980s does not seem favourable.

Trade stores

As I pointed out earlier in the discussion, one of the other sources of cash income to local villagers is the operation of small-scale trade stores. While the general pattern of success of trade stores in the Morehead District has been met with difficulties, it is apparent that this seems to be a 'viable' form of business enterprise to some villagers in the Suki area especially. I have noted already that a reliable shipping service along the Fly River to meet demand created by Ok Tedi certainly has had positive impact on their continued survival. Their success is illustrative of a variety of basic consumer goods sold in their stores. The successful stores which come immediately into mind are those located at Riti (SITA Trading) and one at Pukaduka, to name but a few of them.

Small-scale trade stores in Transfly and Bensbach areas, on the other hand, are the ones which face major difficulties in keeping up with stock. They sell a small range of consumer goods. In some, they have declined in existence. Major problems for this cause are transport difficulties which is further compounded by geographical isolation of some villages, limited capital for continued operation, lack of managerial and accounting skills and to some extent problems of credit where 'relatives' do not pay up for their debts on time.

Figure 2. Royalty payments from tourist activity, Bensbach, 1976-1980

source: Tapari 1988:34-35

The existence of Tonda Trading, owned by the Bensbach Wild-Lodge currently located at Morehead Government Station, has been particularly useful for some operators in the District. This is because they buy their stock from this enterprise usually at an inflated price. Serwenem Business Group from Kiriwo village is one such example which purchases its goods from there. Thus in this case the stock of trade stores in the remote villages of the District is really dependent on stock with the Tonda Trading. If stocks are limited because there has been no shipment of goods from Daru also means that some village stores too have to operate with limited stock on shelves (Richard Mbeakit, personal communication, 1995). In other cases though, operators buy their own goods from Daru and have to pay high transport costs for the delivery of these goods.

The operation of some trade stores are supported by income generated from the sale of crocodile skins. It is in this case that operation of a trade store and owning a crocodile farm seem advantageous. Income generated from the sale of crocodile skins and live young crocodiles is used to purchase basic consumer goods which are sold in the stores. Remittances of cash income from relatives working outside of the village economies also certainly contribute to supporting these enterprises.

Tapping alternative opportunities: the case of villages along the international borders

Like elsewhere in the remote parts of PNG, it is apparent in 1995 that a large proportion of rural population living in the Morehead District does not receive any reliable government services. Those noted in the previous discussion of this paper are no exception. Due to a lack of government's effective participation in delivering basic services to the people, coupled with a limited number of trade stores which sell basic consumer goods many coastal villagers occasionally visit Boigu and Saibai Islands.

The villagers on PNG-Irian Jaya border on the other hand go to Sotar, Kondo and in some cases to Merauke in Indonesia. This situation has led to coastal villagers to use Australian dollars and PNG kina while border villagers use Indonesian rupiah and PNG kina as their modes of transaction. The villagers in the middle Transfly area, however, have not been very much affected by the opening of these new economic opportunities. This is because their aspiration for improving lifestyles and bringing in rural development is placed on regular government visits and services. However, as experience shows in many parts of rural Papua New Guinea, many rural development planners, district and extension officers do not regularly visit isolated localities. This coupled with the planning rhetoric of at both the provincial and national levels become unreal.

Due to a lack of any regular government services delivered to the border villages in the Province means that people will certainly continue to seek basic socio-economic services from across the two international borders. For example, there were two instances where local villagers have been taken across the international borders for medical reasons in 1994. One from Korombo village was taken to Merauke in Irian Jaya and the other from Jarai village, both in the Bensbach area, was taken to Cairns through Boigu Island in a dinghy. The citing of these two examples illustrates many other cases where local villagers have crossed to the Torres Strait islands and to Irian Jaya. The movement of people across the international borders to seek such assistance has occurred because of poor government services which exist in the District and generally within the South Fly

area as well. As noted above, this trend of mobility is likely to continue in future unless the quality and the regularity of delivering government services in the District is improved.

The situation in 1995

Socio-economic situation of rural villagers in the Morehead District has not improved much. Potential to venture into cash generating economic activities is almost non-existent. On the other hand, the potential for developing natural resources are likely to be the main cash earners for the rural villagers. These activities should be encouraged by relevant government departments in the future.

The villagers desire to be integrated into the cash economy has also altered land use patterns and has forced them to travel long distances to extract or harvest resources. In the early 1970s and 1980s the intensity of resource exploitation declined with distance villagers travelled. However, this pattern of land-use intensity has changed in the 1990s. Rural villagers now aspire for modern goods which can be purchased with ready cash in hand. Thus crocodile hunting grounds in selected areas of the Morehead District therefore extend far beyond the limits of past 'normal' crocodile hunting grounds.

For example, Warubi villagers in the Transfly area use land in the area where people from Mukufideben in the Aramba area go hunting for crocodiles. Thus there is constant contact with the people from Mukufideben. This has created conflicts particularly on traditional land boundaries for hunting crocodiles (Wasang Baio, personal communication, 1995). This does not come as a surprise since people presently need cash to purchase basic consumer goods, pay school fees for their children and pay council taxes. Thus a trend is likely to develop where hunters would now be going further into resource areas which were not commonly visited or hunted in the past.

Concluding remarks

This brief description or a review of socio-economic change in the Morehead District during early 1995 clearly suggests that the area is experiencing a declining rural prosperity. The rural dwellers' aspirations for improved living conditions and their desire to be integrated into the cash economy are meeting with limited success.

The situation is a classic example of political rhetoric failing to be backed up by real action. For district extension officers to perform their tasks effectively, they must receive adequate funding from both the provincial and the national governments. However, both levels of government deny them resources, and are largely to blame for the rural under-development in the Morehead District.

My own experience of living in the District has brought home to me the fact that the delivery of development, especially in the form of new infrastructure and the creation of genuine opportunities for venturing into the cash economy, is simply not occurring. I suggest that unless the standard of district and provincial administration is improved, notably in the area of financial management and in the work ethics of the rural public servants (punctuality and efficiency), the path towards a progressive rural society will remain closed.

While a lack of development in the District is closely associated with poor and weak administrative performance, local villagers on the other hand, have made their own efforts to improve their socio-economic well-being. The pooling of cash by clan or family members to set up trade stores and establish crocodile farms to generate cash in hand are seen as positive steps for achieving development in their own communities. These options are, however, limited because most villages are isolated. In addition internal transport costs are high, the population is dispersed, there are limited local market outlets for the sale of fresh food and vegetables.

These problems, coupled with the continued negligence of governments on the provision of socio-economic services in the Morehead District, have led to a decline in prosperity for a majority of the rural people.

The existing socio-economic infrastructure in the District is truly a 'relic of the colonial administration'. The maintenance of government outposts, like health centres, schools, and subdistrict offices, has been very poor indeed. Even if where new facilities are built, they are often left half-completed. It only takes one to travel in these remote areas of the province to experience for oneself the frustration and the feeling of neglect the rural dwellers have with regard to the provision of socio-economic infrastructure.

In short, the obstructions to development in the Morehead District as I observed and reported in my 1980s study were still present in 1995. On the whole roads, health services and government buildings have deteriorated rather than improved in most parts of the District.

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