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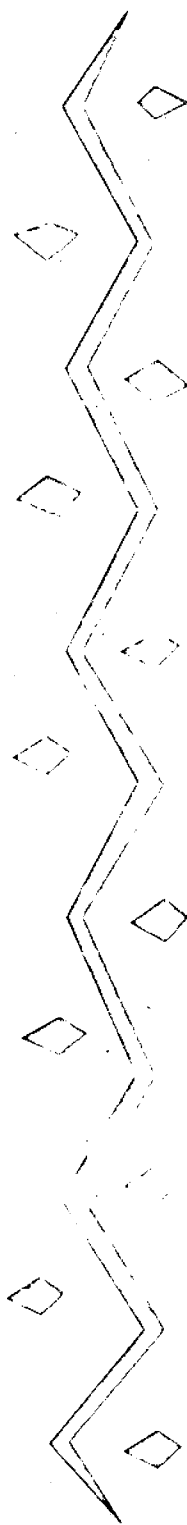
**Development: Papua
New Guinean
perspectives**

◆ Features

*Microfinance; resource revenue; crop diversity and food security;
coastal fisheries development; struggles of women and girls; greater
autonomy for the provinces; professional education; dual salary;
life-modes and language; the AIDS epidemic*

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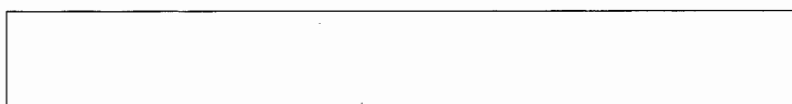


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Appropriate development: Twenty-five years of changing non government efforts and organisations

Elizabeth Cox, Health, Education, Livelihood, Participation (HELP) Resources, Wewak

Papua New Guinea will soon mark a quarter of a century of political independence. Throughout the country, Independence Day is now experienced as little more than another holiday: a day off school and work for those who participate in formal institutions of education and employment. Provincial and rural district centres lack life, pride, optimism and celebration, in spite of major reforms to revitalise local level government being underway for more than two years. Continuous changes of government, ministries, policies and poorly articulated reforms in the structure of government and the delivery of education services, add to a general sense of alienation, instability and disenfranchisement. Cynicism is echoed at every level of society. Non government organisations (NGOs) have seen a number of significant phases and transformations since 1975, and a significant recent rise, and then for many, a plateau or a fall in terms of integrity and effectiveness. We have not yet created the organisations or developed the strategies that will make the inspiring nationalist rhetoric of the constitution a reality.

On the eve of the year 2000, most political and economic commentary of PNG is full of criticism and despair. The health (or ill-health) and prognosis for the nation is now being constantly assessed and re-assessed from the perspective of lenders and investors, those who will consider bailing PNG out on their terms. There is a massive foreign debt, which has escalated in spite of the mineral boom of the early 1990s and regardless of the adoption of stringent structural adjustment packages to counter the impact of the Bougainville civil war and fiscal mismanagement. Economic policy in PNG follows aid and loan conditionalities with options becoming increasingly limited, as successive leaders have driven the country into a corner of debt and no choice. The 'treatments' now being administered to PNG include successive user pays systems for health and education and the implementation of a value added tax.

Grassroots citizens of Papua New Guinea must now swallow very bitter pills; medicine that works in ways diametrically opposed to the tonic of the PNG Constitution that they drank so joyously and optimistically in the euphoria of 1975: the vision, promises and hope of independence. Access to basic services has become increasingly unequal, foreign investment less restricted. Foreign ownership of small businesses and participation in employment in previously restricted areas do not contribute to the development of PNG ownership, let alone confidence in the nationalist declarations that Papua New Guineans can manage their own affairs: economically and politically.

From nationalism to survival

With the progressive removal or reversal of the laws and policies that were designed to achieve integral human development, local self-reliance and national sovereignty, rural people and grassroots workers now feel very profoundly that the objective of their daily struggles has shifted from nationalism, self-reliance and development to simply ... survival. The most basic of health and education services have become increasingly more remote for the rural majority and expensive for the urban populations. Surviving daily social, political and physical stresses and trauma is a skill that all citizens must cultivate. It is a preoccupation for the majority of women and girls. A lot of men still invest and indulge in politics, as leaders, believers and followers, with the emphasis now shifted to thousands of new elected 'members' in the local level government system (less than a handful are female). However the predominant mindset is a mass vote of no confidence in most leaders. People have simply switched off, feeling that their leaders have lost control and the country and the community have lost ownership and basic rights.

The widespread lack of trust and confidence in leaders and policies is confirmed on a daily basis by radio programmes and newspapers and is the common topic for street and village small talk. The current Prime Minister openly declares that PNG is on the verge of financial bankruptcy, and that this is part of the legacy of the moral bankruptcy of the previous government.

Rural isolation

PNG remains a free country and all citizens are, in principle, allowed to think, proclaim and publish criticism of their leaders and cynicism about the future. PNG has no political prisoners as such, yet everyone senses insecurity: watching their step, their mouths and their backs. Few people at national level appear to care what the 'ordinary people' think, feel and experience. The rural people don't know what their leaders are thinking or doing, and vice versa. Rural people are deeply cynical and disappointed. When they ponder this deeply demoralising situation against the backdrop of the promises of the founders of independence it is not surprising that some are volatile and violent and moved to menacing and destructive behaviour. The manifestations of peoples' anger and discontent only lead to more deprivation, allowing public servants and leaders to justify avoiding risky travel in rural areas and simply staying away. Insecurity, violence and destruction tragically and ironically often turn back in on the

community. The hardship of dislocation and disenfranchisement is especially felt by the women and girls, making the struggle for family survival dangerous and twice as difficult.

This scenario is a far cry from the slogans and catch-cries of independence – self-reliance, *bung wantaim* ('let's cooperate and work together') and *yumi yet inap* ('we can do it ourselves'). It is important to reflect on what went wrong. What did government and the people fail to do, shortcut or compromise? Many academic, political and economic commentators have analysed where successive governments of PNG strayed from their intentions. This paper attempts to describe the history and the changes in the structure, outlook, orientation and intention of NGOs and community based organisations. It attempts to explain how many of these organisations too, thus far, have failed to get it right and also failed to deliver.

Village development as a focus

The nationalist sentiments of the independence decade were matched by a great deal of thinking and organising around rural development. Offices were set up in national government and schemes were established to reflect the sincerity of the first leaders' solidarity and support for the people and rural development. Many rural development organisations and projects trained, mobilised and motivated people around the idea of self-sufficiency at the family and community level. People debated what was appropriate, and the merits of cash and food crop emphases *vis-a-vis* the national goals. There was much reflection and exchange on strategies for inspiring youth to be part of a mass movement for rural development and self-reliance, principles to which the Lutheran Development Services' Yangpela Didiman programme, alone, has remained faithful for almost thirty years.

Political support for rural development

The need to return to the village, as the focus of visioning and implementing change and development, was echoed in the formation of an Office of Village Development within the Prime Minister's Department, and the awarding of Village Development fellowships which recognised and sponsored inspirational and progressive young leaders in innovative rural development programmes. National food and nutrition and appropriate technology conferences and the collective production of *Lik Lik Buk* (PNG's now world famous, home-grown rural development catalogue and how-to manual), reflected the mood of confidence, creativity and collective will to make rural prosperity work.

Initially, the politicians who wrote the constitution and cooperated in the development of an Eight Point Plan for national development were themselves directly involved in rural development advocacy and activities. They were available and keen to dialogue, debate and build a body of development theory and practice for PNG. Rural people felt that there was genuine political interest and administrative support for initiative and

innovation in rural development, rural education, and the formation of popular rural movements. There was a strong sense of solidarity and direct communication between the policy makers and planners at the national level and the leaders, writers and implementers working on the ground in grassroots communities in villages and rural and peri-urban settlements.

Expatriate involvement

Waigani Seminars in the 1970s and early 1980s and a range of other national workshops, brought the development philosophers, planners, policy makers and practitioners together regularly for networking, exchange and debate to further their understanding and capacity to make progress on PNG's once-famous 'National Goals' and the Eight Aims'. However there were many expatriates in the National Planning Office and in the new organisations and institutions emerging at community level. The ideological base and practical expression of all this work was often theirs, and not truly Papua New Guinean. The development directives of PNG offered fertile ground to expatriates who looked for alternatives to the anomie and consumerism of Western lifestyles in the 1970s. Many felt that their values and PNG's vision could be happily integrated, and unconsciously took the lead and the podium to announce their success in transforming (in five to ten years!) village communities and the aspirations of the people. Films were made and articles were written about changes in the physical layout and daily occupations of 'model villages', but these were artificial, superficial and non-sustainable changes deeply flawed in their by-passing of the fifth national goal of working and organising 'PNG ways'.

The euphoria and decisions about rural self-reliance and appropriate technology were being shaped by connections and communication between short-term contract officers in the planning office and many equally short-term volunteers in rural development placements. They had the blessing and support of a handful of rapidly rising nationalist leaders who were all-too-soon moving on to bigger and more lucrative contacts and contracts. There are eduring pockets of Papua New Guinean disciples, devotees, and 'doers' who committed themselves to realising the national goals: women and men who became highly committed to the goal of self-sufficiency, and highly skilled in many appropriate rural technologies and training methods. Many remained working humbly in grassroots community organisations, but they rarely inherited the personal contacts, resources, political power and connections of their transient, enthusiastic, expatriate friends and mentors.

Opening mines rather than minds

From the outset, there were many different interpretations of independence and the call for 'self-reliance'. However, as a well-known PNG lawyer reflected recently, for the past three decades, in terms of the legislation and policy, PNG has been busy 'opening mines rather than minds'. While well-intentioned

volunteers, local leaders and rural development practitioners led their social and practical experiments in rural social development, the progressive restructuring of the nation's economy proceeded to lock the people and the land into quite another kind of development. By the early 1980s large scale logging and exploration for further mining sites were proceeding apace and gaining ground throughout some of the most remote and inaccessible country. Over time, national and provincial politicians provided less and less sympathy and support for rural organisations and programmes that locked out or questioned their foreign investor friends. Rural (rather than 'village') development grants became rapidly politicised, distorting and disruptive in their influence.

Volunteer and church workers, and local long-term rural development workers who were by this time deeply immersed in the slow process of rural mobilisation and transformation, found themselves in conflict with government agricultural, forestry and planning officers. Those who believed that their work contributed to affirming and articulating the constitution, who still reminded people of the National Goals and the Eight Point Plan after more than a decade of independence, felt obliged to raise awareness about the dangers of inappropriate design and execution of large and expensive loan-funded rural development programmes, wholesale resource exploitation and the dangers of diverse foreign lending. They were increasingly regarded with suspicion, even labelled subversive and anti-development. The expatriates were regarded as eccentrics and hippies and the loyal, local communities and leaders treated as harmlessly misguided and misdirected. Their erstwhile political supporters had moved into another world and had adopted another vision, with new values and new allies for PNG's 'development' and a base for their own plans for personal power, family security and prosperity. No one questioned or debated anymore about what 'appropriate' development meant.

Loss of support for rural development

In the 1980s, many rural Papua New Guineans were being torn in different directions, between the poles of quick money, political connections and local power bases on the one hand, and faith in and loyalty to the articulation of the constitution through low-cost rural development initiatives dealing with health, nutrition, adult education, appropriate technology and small scale enterprises on the other. The national youth movement, profoundly male in its origins, orientation, membership and operations, began to mass around the people and the projects, which promised quick fixes, fast tracking of development and easy money and power. By contrast, the mass women's organisations maintained a long-term interest in the core rural and community development agenda, which attracted less and less political support. Gradually, the organisations and programmes aimed at integral human development and holistic rural and community development became quite divorced from the mainstream, highly politically, male-to-male political patronage and handout-based approach rural development.

Some of the more innovative rural development movements and programmes were strong enough to survive, even thrive, well into the 1980s. Non government donor and church based overseas donors supported training, innovation, and national networking and exchanges. However by this time, the long-term and most grounded rural development programmes – those that came closest to working in 'Papua New Guinean ways', and in harmony with the other national goals – were rapidly losing political support. There was simply nothing in their efforts for the politicians who, through their new and foreign connections, had tasted glamour, power, privilege and luxury. There were no Nyerere's in PNG parliament, and the committed rural development workers watched as many of their associates and friends who had written and preached rural self-help, self-sufficiency and its connection to social stability, law and order and national sovereignty, became wealthy through alliances with logging and mining companies.

NGOs and rural development in crisis

NGOs were operating in a political vacuum, disconnected from the national development debates and regarded with contemptuous suspicion and amusement by the new leaders and power brokers. Until the mid 1980s, the horizontal networks of cooperation and communication and solidarity across the country, the mutual support and exchanges facilitated by development donors, and the democratic space and support afforded by national development seminars and conferences was sufficient to sustain commitment and some continuing innovation in rural development. But increasingly, the advocates of self-reliance and integral human development came to be regarded as anachronistic, out-of-tune and out-of-favour with the new national mood and political momentum.

By the end of the 1980s, the government of PNG was facing deep crises, in direct confrontation with the deeply destructive social and environmental consequences of the mining and logging industries. A civil war had begun in Bougainville and PNG's sovereignty was threatened from within. The intransigence of Bougainville rebels, the sustained civil war, the wanton mass destruction of physical infrastructure, beginning with the mine and government resources, reflected how deeply people felt about their land and the sustainability of their subsistence base. It also exposed how far they were removed from, and unmoved by, the appeals of government for the people to fall in line with the nation's chosen political and economic path.

The revelations of the Barnett Inquiry into the logging industry, regarding collusion between Asian logging companies, national politicians, former nationalist leaders, writers and poets, and government functionaries at all levels of the Departments of Forestry and Foreign Affairs to manipulate, deceive and intimidate the resource owners, dealt another devastating blow to the notion that government or the people were loyal to the national goals and directive principles of the constitution.

The combined impact of these national crises in development, together with the continuing corruption of provincial politicians and the deep politicisation of government rural development grants and projects, served to sever and polarise the grassroots development workers and national planners once and for all. On the one hand, there were the development organisations and workers working constantly and closely with the people. On the other hand were the political leaders, who were being exposed almost daily as aligned ever more closely with external financial and political interests. This recognition of PNG *realpolitik* eroded the last vestiges of innocent faith in government leadership and the credibility of their claims that they were working in pursuit of the national goals and the basic rights enshrined in the constitution. The people and projects that valiantly maintained their efforts to make the constitutional rhetoric a reality, particularly those who combined and informed action with reflection, realised that they were living on the edge. They were now antagonists, rather than advocates of government policy and practice.

The new wave of local NGOs

The 1990s saw a new wave of development organisations. This was the decade of the indigenous NGO movement. Many new organisations emerged, attempting to combine political awareness and advocacy of social justice, human rights and people's power and participation with practical programmes. Three notable areas of work were the NGO literacy movement, the grassroots environment movement and local human rights organisations. For the first time PNG university graduates were on the inside and running, rather than merely patronising from the outside, development organisations and programmes. The thrust was political, with the emphasis on rural development ideology rather than practice. The battle between Papua New Guineans, regarding recognition and realisation of the promises of the constitution and basic rights, particularly the rights of land and other resource owners, was on.

Literacy movements moved from the conservative church-based programmes and took on a Friereian approach. The consciousness-raising thrust of the NGO literacy movement found itself at ideological and methodological odds with a renewed government interest in literacy, motivated by a desire to be seen to be working towards the global goal of 'Education for All'. Most funding was channelled into the government programme, yet the NGO initiative connected, inspired and communicated direct to the heart of thousands of disenchanted rural communities. For an important political and historical 'moment' that lasted almost a decade the peoples' will and ways were given space and support from educated citizens and the donor and political connections they had forged globally.

The local environment movement always suffered from a lack of funding. However in the wake of the Bougainville and national logging crises, the movement was able to mobilise and inform hundreds of thousands of people. The literacy and

environment movements were weakened by the fact that they did not sufficiently acknowledge, inform or build their work on the important social movements and developments that had gone on for two decades before them. The rhetoric and calls to action were global in their themes, but failed to build on a base of local history and experience.

The young leaders and activists at the helm of these movements made the strategic error of thinking that they were the first to arrive at a political analysis of PNG's colonial and post independence history and the first to conduct popular awareness. They thus missed the potential for building a solid connection and securing a mandate from the well-grounded community organisations and organisers that had emerged in the heyday of mass rural development and conscientising efforts of the 1970s and 1980s. Without a practical rural development base, without solid alternatives to the structures and systems they critiqued, they could not attract the majority of the mature rural population, who recognised that taking up new politically-based development programmes meant risking falling out of favour with the growing systems of local political patronage, neglecting an already tenuous subsistence base, or cutting off the possibility of benefiting from local resource exploitation projects and their many associated forms of pay offs.

For a while they managed to gain the support of the mass rural women's organisations, but they tended to use, even abuse, rather than support the women's own base and resources, and it was often quickly revealed that their agenda was as much or more personal and political than it was peoples', let alone women's development, participation and prosperity.

The local human rights movement was linked closely to the emphasis of the literacy and environment movements. All three movements focused their efforts and popular education programmes on propounding the principles of the constitution, and acting to protect PNG's rare and precious natural resource base. Young lawyers were available to landowners, activists, marginalised communities and youth in conflict with the law. There was great promise, but an enduring problem of male arrogance and political ambition, in these new movements.

The role of the PNG Constitution

Like the expatriate development workers who led many of the efforts to realise the constitution through the rural development initiatives of the 1970s and 1980s, the young PNG development leaders of the 1990s become the self-appointed thinkers, spokespeople and negotiators for the grassroots population. However, this time around they not only lacked a mass mandate, they also lacked a solid programme base. Their rhetoric had no connection to practical programmes, beyond the brief years of homegrown literacy movements. The enduring relevance and inspiration of the national constitution was still their platform, but it was a reference point for rhetoric.

If known, understood and owned by the ordinary people, the PNG Constitution could inspire and fortify their sense of

identity and rights. It would also discourage the use of violence as a means for expressing frustration or resolving conflict. The constitution was translated into *Tok Pisin* at independence but has never been utilised effectively as the framework for a popular vision and action for appropriate development.

Collapse of the local NGO movement

After a wave of popular support and donor assistance in the early 1990s, the local NGO movement has been fractured and divided by many internal and external forces. The self-proclaimed leaders, mainly male, formed surprising alliances with the World Bank and mainstream politicians. Many entered formal politics and gained a seat in parliament when substantial World Bank funds were at their disposal, and they were well resourced and positioned to champion the grassroots support for the 1997 military opposition to the use of Sandline mercenaries. Entering parliament as a small independent bloc, they became instrumental in the formation of what has now been publicly pronounced as the most corrupt and incompetent government since independence.

With the shift in Australian assistance from budgetary to project aid, PNG is overwhelmed by Australian consultants and

development projects that prop up barely functioning and non-delivering rural agriculture, health, education and community welfare services and their deteriorating infrastructure. Many local NGO leaders and experienced community workers have left the NGO movement and are now employed as local consultants or by foreign aid organisations where they earn more in a day than rural families do in a year. The local NGO community is in disarray and forced to accept claims regarding their low capacity and effectiveness by those who now, ironically, hold the purse strings to large NGO grants.

With a new government in place, a search is on for new leadership in the NGO and popular development movements. Many of the remote rural development organisations and their partner communities, feel more alienated and neglected than ever and it remains to be seen whether and how effectively Papua New Guinea can build a new drive and platform for appropriate development. The imperatives of the constitution, more urgent and relevant than ever before must be translated, understood, internalised, owned and articulated by and with the grassroots and rural 'majority' before appropriateness and sustainability can be intensively debated, effectively planned and designed and ultimately achieved.

Sustainable credit schemes for rural development in Papua New Guinea

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Introduction

Following on from innovative experiments with credit programmes for small enterprises in other developing countries such as Bangladesh, Papua New Guinea is experiencing a proliferation of non-bank credit schemes as well as resurgence in attempts to reinvigorate existing government-backed credit programmes. This paper reviews the policy issues surrounding the dismal performance of credit schemes in Papua New Guinea (PNG) and then goes on to suggest how donors, including the Australian Government, can assist in alleviating constraints faced by existing schemes. The thrust of the paper lies in a number of truisms: savings and management training are neglected components of existing schemes in PNG, credit schemes must be profitable to guarantee sustainability, not everybody will be successful entrepreneurs, and cheap credit can impoverish both the providers and their clients and thereby undermine rural development. We note at the outset that although credit cannot be a panacea for all that ails small enterprises, it remains true that firm growth requires investment, and investment often requires credit. A further caveat to note is that the problem of credit access in PNG, as in other countries, can be used by some as a mere smokescreen for other more fundamental problems such as lack of management and marketing skills.

Overview of credit schemes in PNG

Existing methods of intervention in small firm credit provision include the Rural Development Bank (RDB), Women's Credit Scheme, Small Business Guarantee Facility (SBGF) of the Small Business Development Corporation (SBDC), PNG Credit Guarantee Scheme (CGS) administered by the Department of Finance, Savings and Loans Societies and NGO-supported credit schemes. An informal financial sector is also beginning to emerge.

Rural Development Bank

The Rural Development Bank of PNG, which is now part of the PNG Banking Corporation (PNGBC), has sought to promote various programmes favourable to small enterprise sector development. These include hire purchase and equipment finance schemes, small rural loans, mini loan schemes for women and youths, smallholder coffee rehabilitation loan schemes, and

commercial industrial loans. It has also helped to implement some government programmes such as cash crop price support schemes, government grants and interest subsidy schemes to enterprises in disadvantaged areas. Although the RDB was created to provide small agriculture loans, it has had a long history of serving larger farm units and non-farm operations oriented towards the urban sector. The RDB provided only 45,000 loans in the 20 years from 1967 to 1987 (UNDP 1998:10). Loans to rural borrowers in this period represent an average of 2,250 loans per year for an average rural population of three million people (0.075 per cent coverage).

Despite attempts to reform the RDB by merging it with the more successful PNGBC, problems experienced since inception are well documented (see Kannapiran 1995). These include:

- failure to reduce costs at the centre (personnel cost rose from K2.7 million in 1985 to K5.2 million in 1990, and administrative costs increased from K5 million to K10 million in the same period above the agreed level);
- mounting losses due to loan default for agriculture, commercial and industrial portfolios;
- data on loan recoveries not being readily available, thus frustrating donor agencies, namely the World Bank and Asian Development Bank (ADB); and
- clear evidence of pervasive political interference with the objectives of the bank.

Until recently, the RDB has been technically insolvent without continued government injections. For a long period the RDB has failed to adequately address two paramount objectives: self-sustainability and extensive outreach to the rural population. It is now seeking to achieve these objectives by seeking a balanced portfolio (now 40 per cent agriculture and 60 per cent non-farm lending, with an average loan size of about K400,000 and about 1,600 loans a year) and reversing a long-term trend of very substantial losses (on-time repayment is about 30 per cent, with agricultural lending about 15 per cent on-time). Loan repayment is now closely linked to performance reviews of officers sanctioning them (UNDP 1998, Rural Development Bank 1998). Nevertheless, with the continuation of highly subsidised interest rates, at an average of eight per cent, and unabated politicisation of lending and loan recovery efforts, the objective of self-financing will remain evasive. Indeed,

even the RDB accepts that this will remain so for some time as many borrowers continue to view its loans as free handouts (Rural Development Bank 1998:2).

Women's credit scheme

As early as 1982 the PNG Government recognised the importance of income generation for women, setting up a Women's Grant Scheme which provided funding but not technical training or structures. As a result, the funds were used as consumption handouts (UNDP 1998).

In 1988 the South Pacific Forum's Women's Bureau via the Asia Pacific Development Centre financed pilot credit schemes in East Sepik and Simbu provinces. Additional programmes were started in Milne Bay, Eastern Highlands and Western Highlands. However, as with other credit schemes in PNG, the programmes were found to be weak in both record-keeping and management, coverage was very low, and, with the exception of Milne Bay, the women involved were not in the target group of the poor (UNDP 1998:12). At the end of 1995 the cumulative number and amount of loans from all five schemes stood at 384 and K87,574, respectively. Most funds ended up not being used on productive activities, with the exception of Western Highlands, which placed a high and sustainable interest rate on loans, kept good records, and assiduously pursued clients for repayments (UNDP 1998).

Further support for expansion of the above programme subsequently came from the New Zealand Government through the National Council of Women (NCW) to the provinces, through a cost-split arrangement with the Department of Religion, Home Affairs and Youth. This programme has so far provided K945,300 to the scheme. Under this system, women already involved in the NCW through provincial and district councils had access to loan funds for this period via district and sub-district women's associations. Unfortunately, this renewed commitment did not change the previous performance scenario.

New rules were established by the NCW for this scheme during 1997 whereby funds are lent from the national association to provincial associations at ten per cent (eight per cent interest, two per cent fees flat), and the associations can, in turn, charge up to 20 per cent flat to borrowers. Repayments are required over a two-year period back to the national association, with a six-month grace period. Credit management training was provided to provinces during 1996 and 1997 (UNDP 1998), and the World Bank provided K2 million for capitalisation of the 19 districts and the National Capital District at a rate of K20,000 each. Results of this new initiative are not yet known. However, the United Nations Development Programme (UNDP) could not verify the existence of accounting systems, credit requirements, forms, or other information on payments, with the exception of Bougainville (UNDP 1998:13).

Small business guarantee facility

The SBGF is a credit guarantee facility that was instituted in 1996 by the SBDC with an initial capitalisation of K8 million with contributions from the PNG Government (K1.6 million) and the ADB (K6.4 million). Loan guarantees range from 50–100 per cent of principal loan. Eligible loan amounts range from K1,000 to K100,000. The facility emphasises that the guarantee should not make the project viable, but the proposal must be assessed on its own merits. Unlike the PNG Government CGS administered by the Department of Finance, all SBDC guarantees are supported by funds (K500,000) held on interest bearing deposits with the Bank of South Pacific (BSP) and the Australia and New Zealand Bank (ANZ), respectively. In essence, the interest rate paid on those term deposits is less than the normal market rate to reduce the interest rate charged on the loans. Would-be borrowers must first go through approved SBDC management courses which are currently being funded by AusAID (K1.8 million) and UNDP (K115,000). Continuations of these courses are, however, uncertain due to the recent scaling down of the SBDC.

The SBGF has the potential to succeed, but coverage has been constrained by SBDC's limited delivery network as well as those of the participating financial institutions (PFIs), reflecting increasing concerns about 'safety' and the cost of maintaining an extensive delivery network. As of mid-1998, a total of only 18 clients had taken out loans worth some K87,000 (Kavanamur 1999).

PNG Government credit guarantee scheme

The PNG Government CGS was established in 1976 and operates under the auspices of the Department of Finance. Its PFIs include PNGBC, Westpac, ANZ and BSP. These commercial banks provide the loan facilities at market rates and the PNG Government undertakes to guarantee 80 per cent of the loan and interest not recovered. The different types of loan facilities available include individual loans up to K50,000; and group, company, joint venture loans ranging from K50,000 to K200,000 per member provided that there are at least five national shareholders (Kavanamur 1998). Borrower equity and security are not required under the scheme and loans are for any productive activities.

At the end of 1998, there were 930 approved applications guaranteed by the PNG Government, amounting to some K25 million with PFIs. Of these, 26 were outstanding default loans amounting to over K3 million (12 per cent). Most of these have been pending payments from the government since 1996. Lack of budgetary support for the scheme has generated apathy and lack of trust between the government and PFIs. The Department of Finance has accused PFIs of not closely supervising the loans, hence the high default rate. It expects PFIs to provide management advice and training, which is perhaps a tall order given that commercial banks are not development institutions.

Savings and Loans Societies

Savings and Loans Societies (S&LS) were first sponsored in PNG by the Reserve Bank of Australia in 1961. With the strong technical and operational support of the Reserve Bank, the movement flourished throughout the country. However, by the 1980s, major operational problems, resulting partly from politicisation, began to surface. By 1990, the situation had deteriorated to the point where the Bank of PNG (BPNG) suspended the boards of directors and management of some societies. Of 40 societies reported in the 31 December 1990 statistics, only 17 were really operational.

Since the mid-1990s, however, S&LS are now being regenerated as largely savings institutions on a provincial level. Government support in the form of technical assistance is being provided by the BPNG. Start-up involves operational funding from the provincial budget, focused on mobilising savings in the short term, and concentrates initial outreach to salaried workers in provincial centres in a proto-bank operation rather than through the formation of primary societies (UNDP 1998:12). Loans are allowed for the equivalent of an individual member's savings so that, in the event of default, savings are automatically forfeited. These new look S&LS are currently being led by the relatively successful East New Britain S&LS, which has been lending on a 1:1 basis since mid-1993. The East New Britain S&LS had a total membership of 8,891 in September 1998, of which 65 per cent were self-employed and living in the rural areas. Membership savings are now well over K5 million (Tololo 1998).

The Australian Association of Credit Unions is providing iterative short-term technical assistance to the BPNG to assist in the monitoring of new provincial credit unions. These are now operating in other provinces such as West New Britain, New Ireland, East Sepik, Eastern Highlands and Manus. Technical assistance entails the setting up of operational rules and mechanisms for monitoring.

NGO-supported credit schemes

Reminiscent of renewed interest in S&LS, PNG is also experiencing a rapid increase in the number of NGO credit schemes, including the now famous Liklik Dinau Abitore Trust (LDAT), Simbu Microcredit Scheme, *Putim na Kisim* (PnK), Morata Credit Scheme and various church credit schemes. Of these, however, only two have been in operation for more than two years: Liklik Dinau and the Simbu Microcredit Scheme. This reflects the point that the NGO sector in PNG is relatively inexperienced in the provision of microcredit as a means for rural development. Clearly, none of the schemes currently operational have the capacity either to safely control reasonably large amounts of funds or to reach large numbers of poor households.

Nevertheless, Liklik Dinau, a prototype of the Grameen Bank Bangladesh and founded by the UNDP in 1993, has the potential to develop further. Liklik Dinau is an NGO

Table 1: Liklik Dinau Abitore Trust progress, 30 September 1998

Sector	Progress of the project
Branches	3
Centres	1
Groups	234
Members	1168
Borrowers	1120
Loans disbursed	1459
Members' savings	K113,261.47
Amount disbursed	K440,499.96
Interest earned	K 38,684.18
Interest rate	20 per cent
Recovery rate	96.08 per cent
Loan duration	50 weeks
Repayment method	Weekly instalments
Target group	Rural women

Source: Nandape (1998)

microcredit scheme backed by UNDP, PNGBC, AusAID, NCW, Peace Foundation Melanesia and a number of PNG Government departments which currently operates mainly in the Eastern Highlands province. Its target population is a minimum of 50,000 disadvantaged women in rural areas. The scheme lends to both groups and individuals, with a recovery rate of 96 per cent. It has a savings membership of 1,123 and loan coverage of 1,120 borrowers (Table 1). Loans are disbursed on a succession basis: K300, K750 and K800. Liklik Dinau is well insulated and does not suffer from political interference, a now endemic 'PNG disease'. (See papers by Bablis, and Kopunye, Purumo and Newsom in this issue.)

Informal financial sector

Informal money schemes, the world over, range from cash based rotating savings and credit associations (ROSCAs) commonly used by peer and ethnic groups to systems of social credit or credit in kind. In PNG, major sources of informal credit are the extended family or clan (*wantoks*) and rural trade-store owners. New emerging sources now include semi-professional moneylenders in urban areas, who charge up to 30–40 per cent per fortnight on short-term loans. Types of ROSCAs that now exist include *Wok meri* groups serving rural women who pool funds for on-lending, often with a small interest, and *Sandes*, often involving working women who meet regularly and contribute an equal amount each for rotation. But, as observed in most countries, less than one per cent of the working capital needs of small enterprises are met by moneylenders (Kavanamur 1994).

A noteworthy development in 1999 is the proliferation of about eight 'quick money' schemes promising gullible depositors 100–200 per cent interest a month, the main ones being Money Rain, U-Vistract, Millennium, Windfall, Bonanza '99 and Nekong. Although these schemes are registered as companies

with the Registrar of Companies, they have no banking licences as required under the PNG *Banks and Financial Institutions Act* administered by the BPNG. The schemes took the country by such a storm that the grassroots, bureaucrats, politicians and church leaders scrambled to deposit their life savings.

However, when the commercial banks rallied behind the BPNG in mid-1999 to freeze the accounts of these schemes, the owners began indefinitely deferring payouts. To date, it is not clear how such schemes could pay out between 100 and 200 per cent interest on deposits. The commercial banks argue that central to the trade is that money received from new investors is re-lent to the initial batch of investors as their dues mature, a system somewhat akin to ROSCAs. The more new investors are lured, the more capital base is available to meet the matured dues. The danger, however, is that as more investors enter the schemes and more dues mature in very short spaces of time, pressure mounts on the proprietors' ability to provide timely disbursements. Another possible explanation is that these schemes are linked to similar international schemes where PNG proprietors invest their depositors' monies in return for foreign currencies, which are then brought into the country to capitalise on the current weak kina. What is certain, however, is that these schemes have now been ordered by the BPNG to pay out depositors within three months and obtain banking licences.

Policy issues and conclusions

Our discussion of both government-mandated and NGO-supported credit schemes points to a number of policy issues that the Australian Government and other donors, the PNG Government, credit-related NGOs, development studies schools/networks and clients can help address. Key problems faced include lack of appropriate bookkeeping and management records by both credit providers and clients, the continued lurking danger of political meddling, high cost of service delivery networks, arising partly from safety issues, mediocre internal and external monitoring and evaluation mechanisms, highly subsidised interest rates, imperfect information on credit facilities and world's best practice leading to high transaction costs, inexperience of PNG NGOs in 'financial intermediation', near absence of provision of non-financial services such as management training, neglect of savings facilities, timely reimbursement of funds for CGSs in the event of default and an embedded handout mentality where public funds are involved. Arising from these problems are two fundamental results: lack of financial self-sustainability and limited coverage of target clients.

Although there is already some modicum of external support towards addressing the above problems, further assistance is

required in financial intermediary capacity building as opposed to merely transferring skills to one or two people; start-up training for loan utilisation in non-traditional skills; creation of database and information centres on PNG microcredit initiatives, world's best practice, and advisory services; and a small library with Internet access for credit providers and clients.

Support is also required for Village Finance Limited and the RDB, two subsidiaries of PNGBC, who are in the process of providing on-lending services to emergent intermediaries. Such support can be towards intermediary training and in assisting the BPNG with evaluation and monitoring of credit schemes. Support is also required in assisting the PNG Government in formulating an official government policy on credit schemes and mechanisms to regulate such schemes without stifling them. Currently there are no such policies and mechanisms.

Overall, improving the provision of small enterprise and poverty alleviation credit would at the very least contribute towards reviving rural life in PNG. This can only happen when clients continue to have a choice of lender, considering the fact that formal financial institutions in PNG are shrinking.

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Microfinance and financial intermediation in rural Papua New Guinea: An integrated scheme

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Introduction

Four million people in Papua New Guinea (PNG), more than 85 per cent of the population, live as semi-subsistence farmers in rural and remote districts. While there is some plantation farming in coastal areas, contact with the formal economy is intermittent, mainly through sales of surplus garden crops or artefacts for cash at the nearest town market. There is little small or 'micro' enterprise beyond the towns.

Many, if not all, rural people would like to be able to engage in some form of income-generating activity in order to improve their social and economic well-being. For the development of community enterprise to occur, however, some form of financial service, no matter how rudimentary, is a necessary, if not altogether sufficient, condition. As enterprises become larger and more complex, so the demand for a *diversity* of financial services increases. Financial intermediation – where a financial institution acts as an agent for moving money between depositors and borrowers – becomes essential.

There are no formal financial services for rural people in Papua New Guinea. It is unprofitable for banks to operate in rural districts. Rural people have little life experience in business. They are considered to be both poor savers and bad loan risks. Traditional systems of ownership and land tenure have made it impossible for banks to obtain their conventional loan collateral. Communication is extremely difficult and transaction costs are high. Problems of law and order raise security risks beyond acceptable levels.

The bad history of rural finance

Rural Papua New Guinea has not always been without financial services. In the last years of Australian administration, a special unit was formed in the central bank with the task of creating financial cooperatives throughout the colony. Similar to Australian credit unions but derived more from a South Pacific model, they were known as Savings and Loan Societies (S&LS). Although cumbersome and inflexible in design, their role was to accumulate 'member' savings and make small loans for prudential or productive purposes. They were genuine, though basic, financial intermediaries. Production and retail cooperatives developed alongside them in many areas. As one form of cooperative prospered, so did the other. Some 300 S&LS were formed and, when the Australians left, their development and custodianship role was taken over by the new Federation of

Savings and Loan Societies. Owned cooperatively by all the S&LS, it would look after development, training and financial supervision. Ultimate responsibility for licensing and compliance audits would remain with a small registry within the new central Bank of Papua New Guinea.

Today, not one S&LS has survived in rural Papua New Guinea, for any number of reasons: a collapse in commodity prices in the late 1970s and early 1980s; inefficient, even corrupt, direction and management; lack of training; cultural inappropriateness; *wantokism*. Whatever the causes, many people lost a considerable amount of money and there is much apprehensiveness about the risks of having the experience repeated.

Some 20 S&LS survive but only in the 'modern' sector, where an employed membership base affords some stability of income and assurance of loan recovery. Legislation relating to S&LS is about to be updated. Encouraged by the central bank, they are beginning to expand at provincial level, in cooperation with provincial governments. On the other hand, it seems now to be accepted that the task of development at the grassroots must be left to other forms of microfinance.

Of course, some forms of microfinance do already exist (see Felix Bablis article in this issue). For example, there are a number of projects in Highlands provinces, the Sepik District and now in the squatter camps around Port Moresby. They are sponsored by international agencies and non government organisations (NGOs) and are targeted at the vulnerable poor, mainly women. They mostly offer small revolving loans, and sometimes savings. A Village Banking scheme is emerging. But none of these schemes is offering full intermediation, the precondition for widespread microenterprise and small business growth.

Origins of Putim na Kisim

Sensing the gap, in March 1995 the Head Bishop of the Evangelical Lutheran Church of Papua New Guinea, Sir Gaetake S. Gam, convened a symposium of church community leaders at the Bundun *Ples Bung*, in Morobe Province. The symposium was supported by the Hanns Seidel Foundation of Germany (HSF) and facilitated by Credit Union Foundation Australia (CUFA) and the PNG Federation of Savings and Loan Societies (FESALOS).

The symposium recommended that the Church Council promote the formation of a rural finance facility within its structure and that the development of such a facility should be

the responsibility of the Lutheran Development Service (LDS). Mindful of previous failures, it further suggested that progress should be careful (*go isi!*), that it should be exhaustively designed and tested at the grassroots, and that up to eight different areas should be selected as target projects.

In 1996 the project began, with HSF, CUFA and AusAID funding. Its working title was *Putim na Kisim* (PnK), literally 'put in and take out', a name that has stayed with it to this day. The pilot areas selected were: Alkena/Tambul and Banz in the Western Highlands; Simbu Province; Goroka District in the Eastern Highlands; Sapmanga, Mumeng and Finschhafen in Morobe Province; and the Businessmen's Association in Lae. Of these, all but Mumeng and the Lae businessmen have stayed with the project. As awareness, needs identification and design proceeded over the next two years, other groups – in Gulf, Madang, Enga and Morobe provinces – volunteered to become involved. Some have now begun; others may be part of the next phase of PnK development.

Lutheran Development Service and the Yangpela Didiman programme

As with Village Banking (Nelson et al. 1995), the role of the in-country partner NGO is of paramount importance. 'The most prevalent (and proven) type of partnership is with existing NGOs . . . typically multi-sectoral organisations that can add village banking to existing programme portfolios.'

When PnK began in 1995, the LDS with its 'integrated Yangpela Didiman programme' precisely filled this role. Yangpela Didiman (YD) literally means 'young farmer'. This programme has been running for 25 years.

Village people are offered a ten-month course (*wokabaut skul*) to equip them to serve their people as volunteer development workers. The course is centred on agriculture, but allows for the teaching of basic living skills and spiritual development. The culture of fish, either in the ocean or lakes and artificial ponds, is given special attention (LDS undated).

There are more than 3,000 of these trained volunteers, known as *motiveta* (motivators), spread across hundreds of villages, mainly in what used to be New Guinea (although there are some in Papua). Their work has been supported by more than 30 LDS extension officers who visit them frequently, sometimes living in.

The major achievements of the Yangpela Didiman programme were recognised as follows (LDS 1994):

- Over 20 years of experience, development and adaptation, YD [Yangpela Didiman] has proved that the promotion of integral human development and sustainable rural development through a system of training and supporting motivated community members (*motiveta*, who by example motivate others in their village) is appropriate and viable for PNG.

- The YD rural development programme is complementary to government efforts and is well recognised by government for its significant role in rural development and the extent to which it has inspired other agencies.
- The YD programme has demonstrated that an integrated approach to rural development is more practical, fruitful and sustainable than a sectoral approach.
- Given the major logistical problems of PNG, the physical achievements of the YD programme in sustainable, integral human development are very impressive. Indeed, YD appears to have succeeded where most others have failed.

This, then, was the programme onto which PnK came to be grafted. The grafting was done through an intensive series of awareness, needs identification and programme design workshops in the pilot areas, conducted by facilitators from CUFA and FESALOS. These workshops were supplemented by 'plenaries' where representatives from all pilot areas came together at Bundun *Ples Bung* to share experiences and advance the design of the ultimate financial support structure.

Designing an appropriate microfinance model

The assumption from very early on had, therefore, to be that no single microfinance scheme would fit all needs and all circumstances. We looked at a whole 'menu' of experiences from different parts of the world, including Aboriginal Australia. It can be reasonably claimed that no model in Otero and Rhyne (1994) was left unconsidered. In the end, the chosen model comprised an eclectic array of microfinance instruments (MFIs), on roughly three tiers, which could be selected from and interrelated both horizontally and vertically to meet each set of local circumstances. In simple terms these include:

- individual depositors (rare)
- small group 'solidarity' savings cells
- community/village savings 'clubs'
- solidarity group loans (Grameen style)
- peer group (community/village) loan funds
- direct microenterprise/business borrowing
- individual borrowing (rare)
- district (or higher) credit union cooperatives

Systems of governance, rules and levels for each MFI would vary, although not too significantly, from community to community. Nonetheless, it was considered worthwhile drawing up templates, or models, for each form of MFI. Of course, no one community would be likely to employ more than two, at the most three, of these forms. Just as the 800 PNG cultures are identifiably different, so PnK's community linkages will be different. The ultimate solution had to be flexible enough to encompass all.

The final key to drawing these together would be an apex organisation, PnK 'central'. This body would be the intermediary of last resort; provide all training and community support; arrange training in individual and group self-reliance and microenterprise management; monitor the sustainability of the system by undertaking first-line audit; and develop new, grassroots PnKs. Although formed within the LDS, PnK central would eventually become a discrete organisation, while still relying heavily on the YD network.

A key decision in the final plenary was that PnK should be open to people of all persuasions, although it should be embedded within, and supported by, the Evangelical Lutheran Church (ELC) to begin with. The ELC Council accepted this, along with all other proposals. As time has passed, PnK has begun to be seen as a financial service for all people of rural PNG.

Early stages of development

The next steps, in 1997, were to select and train the two leaders/coordinators of PnK central and begin the process of institution building, and to begin more intensive training of village-based leadership – mainly YD but with some LDS extension officers and women's group leaders – so that PnKs could open in the pilot areas.

Because of the geographical spread of these areas, one PnK central coordinator was based on the coast at Lae and the other in the Highlands at Banz. This has worked well. They both completed the South Pacific Certificate in Enterprise Development, a practice-based leadership course, in three segments of ten days each, conducted by the Asia Pacific Cooperative Training Centre and accredited towards an MBA with the University of the South Pacific. This course has successfully equipped them to take on both training and managerial roles with the emerging PnK system:

The village-based people attended a PNG Rural Microfinance Course, similar in structure to the South Pacific certificate and conducted by the same training centre, this time in conjunction with HSF and CUFA. This course expanded the skills of the YD *motiveta*, adding a basic knowledge of microenterprise, microfinance and cooperative management, while reinforcing the skills they had acquired through their LDS training. Two of the practical requirements for completing the course were a satisfactory enterprise business plan and success in starting up, or improving, a PnK MFI. (At this point, CUFA passed its project management role to Australian Volunteers International, although CUFA will still contribute skilled personnel to the project.)

Seventeen people completed the course in 1998. At least ten of these, assisted by the PnK central coordinators, have been successful in expanding, or opening, PnKs in their home areas. As a follow-up to the Rural Microfinance Course, in September 1998 a two-week PnK workshop was held for women from all ELC districts. Since then there have been skills workshops for

community leaders and YD trainers in board leadership, policy setting, financial management and basic bookkeeping.

Encouraging results

One of the emerging schemes, Jericho PnK, had 50 full members in June 1999 (Kopunye 1999). Membership costs K100 and there is an administration fee of K6. Full members are allowed to borrow the K100 they have put in and pay back at ten per cent interest (calculated as 50 per cent member's saving, 40 per cent reserve, and ten per cent administration). By September, membership had grown to over 300.

The isolated village of Sapmanga in the Sarawagut Range in Morobe has a similar story. They started as early as 1995. YD, Kitowe Mumusiong, now manages a PnK which has over K12,000 in deposits and which is planned to grow to serve over 3,000 people in the entire valley. Sapmanga has an impressive history of community enterprise, with a *wokabaut somil* and a *woksop* in which furniture is made for sale throughout the valley and timber is cut for permanent housing.

Meanwhile, coordinator Aua Purumo has opened a PnK for Busu Parish in Lae, and another is being formed for ELC staff and workers. An application has been made to the Bank of Papua New Guinea for an S&LS licence for PnK central. PnK is also discussing proposals for further development funding from 2000 onwards with AusAID's Community Development Scheme.

Bougainville: A similar story

In late 1996, the Bank of Papua New Guinea and the then Bougainville Transitional Government asked CUFA's advice to set up a microfinance scheme to help the people of rural Bougainville with economic reconstruction once the civil crisis ended. A participative design and pilot scheme process similar to PnK was followed and a not-dissimilar structure of options has emerged. The significant difference between PnK and the Bougainville Microfinance Scheme has been that Bougainville had no long-established, large NGO within which such a scheme could grow. In this case, an NGO affiliate has had to be built from the ground up (Nelson et al. 1995). Nevertheless, by early August 1999 there were 13 operating MFIs, with over 3,700 members and some K80,000 in deposits, increasing by more than 50 per cent per month.

Conclusion

It has sometimes been forgotten that financial instruments are very recent in their arrival in Melanesia. They need to be introduced with care, leaving good time and space for inspection, testing and adaptation. There must be opportunities for self-design and for developing a strong sense of local ownership. Where overseas models have been imported – or imposed – in the past, the reasons for their failure need to be carefully

examined, identifying which faults were those of the imposer and which of those imposed upon. Where the latter are identified, the causes should be explored and the chances of future prevention enhanced accordingly. Nevertheless, it is clear that large numbers of people in rural Papua New Guinea wish to come to terms with financial systems and to enjoy their (perceived) economic and social benefits.

Formal financial institutions face insurmountable problems in reaching rural people in Papua New Guinea. The methods therefore have to be largely informal. This involves community endeavour, cooperative enterprise and volunteer effort, rather than for-profit solutions. Identifying and training potential microfinance leaders and managers is essential. Building the capacity of community organisations to assist, especially using existing civil sector agencies, will lessen the risk of failure against which, in any case, prudent reserves should be set aside.

Above all, as the people from *Putim na Kisim* insist, time for thoughtful development is of the essence. *Go isi!*

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The lessons and potential for sustainability and outreach of microfinance institutions in Papua New Guinea and other Pacific Island countries

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Introduction

There have been prototype microfinance institutions (MFIs) in Papua New Guinea (PNG) and in other Pacific Island countries (PICs), including Fiji, Solomon Islands, Vanuatu, Western Samoa, Tonga, Kiribati, Cook Islands and Tuvalu, since the 1950s and 1960s. One example was the revolving fund schemes, usually managed by a local government or women's group. Unfortunately, repayment problems forced them into dormancy (Getubig et al. 1997:114). However, what is new with the 1980s and 1990s MFI models is their high repayment rates, market interest rates and savings and risk aversion products. The rate and extent of outreach achieved among previously considered 'unbankable people' has been phenomenal (Yaron et al. 1997:36). The aim of this paper is to highlight a few strategic constraints, suggestions for improvement, and lessons to meet the challenge of providing microfinancial services to the 70–80 per cent of PNG's approximately four million and other PICs' two million low income populations into the next millennium (Getubig et al. 1997:112).

Framework of analysis

One of these successful new models is Bangladesh's Grameen Bank. This financial innovation, although structured like a bank, is based on group borrowing. Since most of its clients normally lack collateral, peer pressure and cooperation are relied upon to minimise financial risks. Several studies indicate that the Grameen Bank strategy has produced high rates of repayment, and viable and sustainable operations. Thus, the bank could be described as a model worthy of emulation and, in fact, three replications of what is called the Grameen Bank Approach operate in Pacific Island countries (Getubig et al. 1997:114).

An exemplary model is the Liklik Dinau Abitore Trust (LDAT) in Goroka in Papua New Guinea, which can be used as a standard for assessing MFI possibilities in the Pacific region. The author's research findings strongly suggest that the Grameen Bank Approach as trialled by LDAT has great potential for addressing poverty and empowerment, especially of women, on market-based terms and conditions.

The need for MFIs

Successive United Nations Human Development Index figures have exposed the need for MFIs in the region. Based on quality

of life indicators, such as average life expectancy, access to education, and purchasing power, these statistics reveal the extent of poverty. The 1999 index rankings (for 174 countries) from highest to lowest included Fiji 61, Western Samoa 70, Vanuatu 116, Solomon Islands 118, and Papua New Guinea at 129 (UNDP 1999). These rankings, for PICs like Vanuatu, Solomon Islands and Papua New Guinea, reflect poorly on the distributive capacity of their key service delivery institutions such as health, education, infrastructure development and communication, and even financial services.

Another reason that MFIs are needed is the lack of adequate access to usual financial institutions of the majority of PICs' rural and low income populations. Financial institutions play a critical role in wealth creation, which generally leads to higher standards of living. PNG Banking Corporation figures show that, between 1985 and 1995, the number of commercial bank networks and agencies in Papua New Guinea declined by 55 per cent, from 305 to 138. Moreover, only 30 per cent of the population held deposit accounts and less than one per cent had loans with commercial banks. Obviously, there is a huge gap in participation of the mostly rural population in the PNG financial system (LDAT 1998:2).

Major constraints

There are five major constraints on the implementation of MFIs in the Pacific region: the cost of accessibility; cultural limitations on the participation of women; direct government involvement; the need for capacity building and appropriate training; and pressure to expand too soon.

Poor accessibility

First is the practical cost of accessibility due to geographic isolation and sparse populations. This can be illustrated by comparing the population densities of two PICs – PNG: 9 people per sq km, and Fiji: 48 per sq km – with those of two countries in Asia which have relatively successful MFI operations – Bangladesh: 800 per sq km, and Malaysia: 400 per sq km. Thus, the Grameen Bank Approach can work well in many Asian countries because of affordable access to a lot of clients. Also, the recommended ratio of one field assistant to 300 clients is possible for Asia but problematic for the Pacific region (Getubig et al. 1997:112).

In order to maximise accessibility, PNG's LDAT strategically selected Goroka because of its good road network, transport

system, low crime rate and relatively high population density. Despite these advantages, a ratio of about one field assistant to 100 clients is the average. This is based on the fact that a centre has a capacity for six groups, or one field assistant visiting 30 participants and four centres every week. Obviously, the PICs with scattered island communities, like Tonga and Kiribati, or isolated jungle hamlets, as in Papua New Guinea, face even higher accessibility costs (LDAT 1993).

The long-term solution is for governments to improve infrastructure, such as roads and bridges, and provide faster boats. Another solution, based on the author's LDAT research findings, could be to further decentralise the role of the field assistant to 'centre chief'. This would have the added advantage of minimising any perceived, or actual, paternalism. It is most important that people feel they 'own' the process and do not feel that it is something imposed on them. In practice, this means that the responsibility of centre chiefs must be increased. They could take on the routine tasks that field assistants normally perform, like collecting loan repayments and checking on the use of loans. This might mean additional training costs and minimum compensation for their role but it might be worth the gains in project sustainability and outreach. For isolated jungle hamlets or coral islands, a centre chief could be the difference that makes a project successful.

Limited women's involvement

The second constraint relates to cultural limitations on the role of women in formal production. Women in most PICs ensure the survival of the family unit but their traditional role is rarely enhanced beyond subsistence activities. One of the critical aspects of the Grameen Bank Approach is its recognition of women's productivity. There are practical reasons for targeting women. Their activities are generally for the well-being of their families, so supporting the women would be the same as supporting the family unit. There would also be positive multiplier effects, like better nutrition, health and education of children. The traditional role of women needs to change, therefore, to one of contributing breadwinner in a formal sense.

Fortunately, in the case of LDAT, no major problem was evident pertaining to the increased role of women in income generation. In a survey carried out by the author, 80 per cent of the women said that they had the support of their husbands. Anecdotal information from husbands also indicated general to active (in a few cases) support for their wives. Thus, the notion that the men might hinder the women's economic and social mobility was not evident. It remains to be seen what the situation might be at later stages in the project or in other PNG communities and the PICs.

Government involvement

The third constraint is the direct involvement of government. Unfortunately, most MFIs established with good intentions by government turn out to be less successful, as in the cases of

Wewak and Simbu and the PNG Government's Meri Dinao Association. A lack of proper targeting procedures, manifested in the 'handout mentality' of many governments in the region, and the often short-term nature of political interests contribute to the demise of MFIs. A United Nations study of MFIs in Papua New Guinea in 1993 highlighted problems such as loans given to wives of public servants, individual loans given for less productive purposes, a lack of loan supervision, and application of non-market interest rates (LDAT 1993:Annex 1).

This dilemma can be addressed with a structure representative of a private organisation. A good example is the non-political or quasi-NGO structure of LDAT. The PNG Government's involvement is indirect, through PNG Banking Corporation (state-owned commercial bank) and Department of Village Services on the board of directors. By this means, the government has input into the funding and decision making of the microfinance project. Other NGO board members include the Foundation for Law and Order, and UNDP (UN Development Programme) governs the project. Such a structure has an added advantage of attracting funds from bilateral or multilateral organisations that are reluctant to lend directly to government institutions given their poor record of project implementation. The Solomon Islands Credit Union League (SICUL) has a similar structure (Getubig et al. 1997:114).

Lack of capacity

A fourth constraint is capacity building and appropriate training. Most MFIs normally receive seed funds but not training or trained personnel. Many do not see the need to train their disadvantaged low income clients either. On the contrary, however, such financial institutions require people who have specialised skills.

LDAT does training on two different fronts. First, its structure allows for the employment of a technical assistant, provided and paid for by UNDP as its contribution to the project. This specialist is responsible for training branch managers and field assistants, as well as for project monitoring and evaluation. Second, the field assistants run seven-day training sessions for microcredit clients. Participant observation by the author also indicated that the technical assistant continues to conduct his/her mandated tasks. LDAT procedures require that clients be trained before becoming members of the microcredit and savings scheme. This training for a new centre takes place every day for one hour over seven days. Topics covered include how to prepare a loan proposal, how and why LDAT operates the way it does, their pledge of allegiance and, for the illiterate, how to sign their names (LDAT 1993).

A suggested improvement would be to expand training to include basic business concepts. One of the author's research findings was that 90 per cent of clients did not know what profit was. This was also highlighted by the 1993 UN study (LDAT 1993:Annex 1). A second suggestion would be to

improve the delivery method. The oral presentation approach, usually in pidgin that often is not fully understood, is not the most productive method for transmitting knowledge. Available alternatives are the demonstration approach by means of model projects and the use of coaching through appropriate language or translation when the need arises (Bablis 1999).

Thus, the suggestion for possible emulation is for other MFIs to establish similar training arrangements if they do not already have any. However, even if training is critical to organisational survival, it comes with a cost. It would be prudent, therefore, for MFI training to be centralised in a particular regional organisation. For instance, given more resources, LDAT could train field assistants for other MFIs in the Pacific region.

Rapid expansion

The fifth constraint concerns vertical expansion as opposed to horizontal expansion or, in economic terms, supply-driven as opposed to demand-driven expansion. In many earlier cases, MFIs in the Pacific responded naïvely to success stories like Grameen Bank. There was also political pressure to expand quickly to meet the high demand of needy clients. As a result, there was often a lack of proper and prudent planning, and many projects failed because they expanded vertically too soon. The Simbu Women's, East Sepik Women's, and (earlier) Eastern Highlands credit schemes suffered the consequences of this syndrome in Papua New Guinea (LDAT 1993).

However, there have been exceptions like SICUL in the Solomon Islands, which started in 1991 and had reached a population of 6,802 by December 1995. LDAT, in contrast, started in 1994 and has been successful in resisting political pressure to expand quickly. By 1998, LDAT had reached a population of only 1,000 clients between its branches of Goroka and Kainantu. Expansion has been slower than planned but the operating branches are relatively viable and sustainable (Getubig et al. 1997:114). It is critical to note that LDAT's approach has been a measured learning experiment. Now, on the basis of its successes and mistakes, it is poised to accelerate its rate of expansion. LDAT has successfully applied for and been given a financial institutional licence to operate under the trade name of 'Village Bank' in Papua New Guinea in 1999 (LDAT 1998).

Nevertheless, the optimal answer to the question of expansion probably lies somewhere in between the above two approaches and each MFI has to make its own estimations of how best to advance. Various economic analysis tools are available, such as optimisation procedures through the use of MS Excel or GAMs. The Grameen Bank has such mathematical tools (in Lotus format) to assist its project managers in making prudent financial and economic decisions on viability and expansion.

Conclusion and recommendations

Pacific Island governments continue to address directly or indirectly what the founder of Grameen Bank, Professor Yunus, described as the 'human right' of their rural and economically disadvantaged populations to financial services. Despite initial setbacks due to various constraints, there is evidence of phenomenal successes from the application of the Grameen Bank Approach in the Pacific context. One is the outreach record of SICUL in the Solomon Islands. Another is the financially and operationally self-sufficient LDAT of Papua New Guinea.

However, the challenge to learn valuable lessons from existing MFIs and to continue to improve remains. Thus, it is prudent to heed the advice of Professor Yunus: 'This can be achieved by going through an intensive dialogue and exposure programme in the existing units. All the people who would be responsible for implementation of the replication programme of GB [Grameen Bank] must go through this dialogue and exposure programme' (LDAT 1993:33). This advice could be actioned through the establishment of a regional forum for MFIs as a specialist rural industry, perhaps called the 'Pacific Islands Microfinance Forum'. Through this forum, a training centre, research centre, major conferences and workshops could be organised to promote the microfinance industry's critical role in human development in the region.

This paper has provided an indication of the strategic value and potential of MFIs like the Grameen Bank to halt the trend to real poverty and to contribute meaningfully to economic and human development in Papua New Guinea and other PICs into the next millennium.

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Replacing the mountain: Resource revenue accessing and utilisation in Enga Province, Papua New Guinea

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Introduction

Newly elected Prime Minister Sir Mekere Morauta's mini-budget speech in August 1999 had the words 'last chance' in the title. Obviously, he meant that this was probably the last opportunity available to the Government of Papua New Guinea (PNG) to reform itself and break out of the current economic crisis. It was also an important message to resource owners, particularly landowners and provincial governments in mining, petroleum and gas rich areas, to plan carefully and spend all revenue generated. These very same sentiments were expressed earlier in the year at an Australian National University seminar on PNG's Gulf and Southern Highlands oil producing provinces (Simpson 1999).

The discovery of valuable resources in minerals, oil and gas has been a blessing to remote local communities. It has generated substantial benefits for areas that previously no one had any interest in. These projects have opened up and exposed remote locations not only to the rest of Papua New Guinea but also to advanced First World culture. This has had both positive and negative effects, which I will not expand upon here, but the amount of revenue is into figures never imagined before any discoveries.

The Porgera Joint Venture

The Porgera gold mine, located in the Enga Province of Papua New Guinea, is one such project that has considerably benefited the local people, the Enga Provincial Government (EPG) and the nation as a whole. It is the country's largest gold mine, producing over one million ounces of gold per annum between 1991 and 1994 before dropping back to an average of 786,000 ounces per annum thereafter. Besides other direct and indirect benefits, the income to the people of Enga as a whole through the EPG by the end of 1999 will have been K31,300,948 in special support grants, K32,977,265 in royalties (Porgera Coordination Unit 1999) and just over K15,000,000 in sales of equity. There is a further K20 million in the Infrastructure Development Program (IDP). IDP funds are for selected infrastructure development, made available by the Porgera Joint Venture (PJV) as part of the extra 15 per cent equity transfer to the state agreed to in 1993.

The national government has introduced a tax credit scheme (TCS), allowing project developers to spend up to two per cent (initially, it was 0.75 per cent) of their income tax on selected projects and then to claim it back. This scheme was initiated in

Porgera by the PJV in response to constant complaints from landowners that they were not getting enough infrastructure development in replacement for the mountain that was coming down at a faster rate. The TCS is now applied to all resource developments and will be an integral part of all resource development packages in future. The taxation office is in charge of the TCS scheme.

Utilisation of resource revenue

Up until February 1999, the PJV had completed projects worth K23,705,000, ongoing projects worth K5,943,000 and invested a further K9,721,000 in proposed projects in the pipeline for approval at various stages (Community Projects Division 1999). At the start of the scheme in 1992 the emphasis was on road construction and upgrades, on which some K6,952,000 was spent. Over the past three or four years it has shifted to social services, particularly health and education.

Informal evaluation and observation show that education and health projects have been put to good use, possibly because all are in currently operating institutions. On the other hand, all of the constructed roads had deteriorated within three years, primarily because of little or no maintenance, which is not covered under the guidelines of the scheme. This poses a few legitimate questions in people's minds, especially concerning project selection, approval and ongoing maintenance.

Maintenance of infrastructure

The TCS is managed by the PJV as it involves their project and is determined by their profit levels. However, the actual money spent belongs particularly to the Enga people because this is an additional allocation to the province for specific projects, except that it is managed and spent by a private company on behalf of the government. To the credit of the PJV, the recent emphasis on social projects has provided much-needed facilities, especially educational ones. The distribution of projects has been fairly even throughout the province's six districts, and a high standard of workmanship has produced quality results. But the lack of maintenance that followed road construction causes one to ask whether these social projects were selected and approved by the provincial authorities. If so, is there a proper maintenance schedule in place for these and other facilities in the province?

Maintenance for all other roads besides the national highway, and for education and health services, is a decentralised function

looked after by each provincial government. The task is divided between the provincial and local-level governments. While the provincial government looks after major roads, health institutions and high schools, to name a few, local government is responsible for community or village-based projects such as community schools and aid-posts. In theory, between them, the Joint Provincial Planning and Budget Priorities Committee and the Joint District Planning and Budget Planning Committee, created under sections 25 and 33A of the Organic Law on Provincial and Local-level Governments, respectively, should cater for maintenance costs. This assumes that all project grants and Rural Development Program funds are released by the national government within the year.

This then requires a high level of coordination and cooperation between the PJV, the EPG and local government to identify, select and put in place needed projects in line with their five-year development plans. The responsibility to provide ongoing maintenance is then put back onto the governments. Some people have the view that the current management and expenditure of TCS funds by the PJV are for their own convenience, particularly to enhance their public relations programme funded by the government. Further, the PJV's strong desire to keep the management of TCS and IDP funds is possibly to diffuse a general sentiment of the Enga people (to some extent based on a misunderstanding of the role of the PJV) that it is not doing enough development in return for 'digging out the mountain'. The PJV's own argument is that little is being done by the provincial government and that legal authority has been granted to them.

Impact of revenue

While TCS expenditure has had at least some visible impact in various communities, there has been little sign of the use of the other mineral revenue since the mine commenced production in 1990. People still ask questions about what has happened to all the extra revenue that has been flowing into the province over the years. To the credit of the current government, two large projects have been completed: the Ipatas Centre, and Kopen National High School. Costing about K5 million, the centre will at last accommodate the provincial government and provincial administration executive functions that have been operating in makeshift offices following the burning down of their whole office complex in 1993. The completion of the high school will give students the opportunity to further their education. It is hoped that a few more impact projects are identified and completed before the gold runs out.

As the title suggests, the people of Enga in general and Porgera in particular had a desire to see tangible benefits generated by the large world-scale gold mine. The Porgera were fortunate and had the opportunity to document their desires in the tripartite agreement. Twelve clauses out of a total of 20 in the agreement signed between the state and landowners are to do with bringing changes to the remote society, in both physical

infrastructure and social services. All of the clauses in the agreement between the EPG and the landowners express a desire for improvements, including administrative functions. Both the national and provincial governments have delivered on most of them but a few are still outstanding.

There is a perception that Porgera District is changing, particularly in improvements to social services, but that the rest of the province is going backwards. This is starting to create some serious problems. Firstly, it has generated frustrations, jealousy and envy between Porgerans and people from other districts. For example, the transportation of people and goods to and from remote areas will always be a serious challenge, regardless of the mine. Secondly, people from nearby districts are flooding into Porgera, either through migration or day travel, to access services there. Part of the reason for allowing such migration and settlement in the already overcrowded villages is a bid to address the previous problem. This places a strain on the limited resources of the district to look after an increasing population, as the allocation of government grants is based on census figures that were done well before the mine started. The easy conclusion drawn by the people is that Porgera is changing due to 'all the money going in from the mine' and the way the agreement is structured. A closer examination reveals that there are no extraordinary benefits to Porgera District in terms of funding projects and government operations. All are on the same footing.

Conclusion

The development of mining and petroleum industries in Papua New Guinea is relatively new. The longest operating mine was Bougainville Copper, which started in 1973, while Ok Tedi began production only in 1984. Misima commenced in late 1989, and by 1990 Porgera had started operations. Developments in petroleum and gas began only in 1992, when Kutubu and Hides came on stream (Banks 1997). Thus, there is still a lot to learn in devising appropriate policies to properly manage these scarce resources so that the considerable revenue obtained from them can be applied to long-term impact projects, delivering tangible benefits to all people affected.

For instance, the following issues relating to the existing policy and legal framework need to be addressed:

- *Long-term planning* The failure of many governments to deliver within people's expectations has been largely due to poor planning and the absence of long-term objectives. Proper planning should eliminate duplication and enhance coordinated development. The mere fact of the failure to translate millions of kina into capital investments strongly suggests irregular spending allocated mainly to conspicuous consumption. Sections 25(3) and 33A(3) of the Organic Law on Provincial and Local-level Governments, respectively, require among other

things that provincial and local governments draw up five-year rolling plans.

- *Revenue expenditure planning* There are certain mandatory studies carried out and plans drawn up before a development project is approved. These include a social impact study, an environmental study and plan, and a training and localisation plan. Some of these become part of the larger 'proposals for development'. Perhaps this is the right juncture at which to carry out a state-of-the-province study and plan for the expenditure of resource revenue, including in the host district. (Alternatively, a certain percentage, say three-quarters of estimated revenue, could be subject to this sort of planning.) Right from the start everyone would know where the money would be spent. The development plan could become part of an agreement that it would not be subject to change if there were a change of government. This might reduce the amount of discretion that provincial governments currently have, but at least they would have the opportunity to set priorities and select projects at the start.
- *Close monitoring* A monitoring unit should be established to oversee the implementation of the plan. The release of funds from the national government to the provincial governments would be approved by this unit upon satisfactory progress and readiness. The funds could be kept in the respective departments, and the monitoring unit could be in the National Planning, Rural Development or Mining and Petroleum departments.
- *Ongoing maintenance* The level of coordination and cooperation between developers and provincial and local governments should be improved. Projects need to be prioritised in line with long-term development objectives and plans. In doing so, each government would give a commitment to ongoing maintenance. This is particularly for funds tied under initiatives such as the TCS and the IDP.

- *Regular review* For those currently operating projects, it is not too late to initiate planning for the release of funds. Apart from Misima and Ok Tedi, which have only a few years left, the other projects still have a significant life and so should seriously consider careful planning to bring effective change into their provinces. Every agreement has provisions for review. For example, clause 3.4 of the agreement between the EPG and the national government allows review of the special support grants arrangements after ten years (which period elapsed on 12 May 1999).

Resource endowments constitute a blessing and wealth for ordinary people. As such, the maximum possible benefits should rightly flow to them. The government's task is to facilitate the transfer process, and its theme of 'reconstruction and development' gives people hope and comfort. Well, here is one area that requires just a little further tidying up in order to 'replace the mountain'. And the revenue is already there; we do not have to go looking for money to bring real development.

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Reinvigorating sustainable development in Papua New Guinea: A systems thinking approach

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Introduction

There is little doubt that the conceptualisation and implementation of sustainable development in Papua New Guinea (PNG) has fallen short of expectations, from all points of view. The mountain of obstacles that stand in the way of meaningful implementation of developmental policies is a procedural nightmare. Hence, well-meaning programmes have had little, if any, impact on target areas. A new approach to sustainable development is therefore needed.

In this paper we propose that conceptions of sustainable development need to be distanced from the current reductionist thinking that has impoverished both the sciences and social sciences, following René Descartes' insistence on dividing each phenomenon into as many parts as might be possible and necessary in order to best solve it. This preoccupation with components, as is evident in compartmentalised academic disciplines, has characterised the Western intellectual tradition since the eighteenth century. Unfortunately, this way of thinking can result in our losing sight of the big picture.

We argue that there has to be a balance between reductive disciplines and meta disciplines in order to develop meta theory. We posit that a systems approach to understanding sustainable development in Papua New Guinea would be akin to how Melanesia has always viewed political, social, economic, cultural and environmental phenomena. In Melanesian thinking, any phenomenon is always placed in a cosmological context. Greater use of this approach would lead to an enhanced understanding of the interconnectivities between social, political, economic and environmental domains. Such a development would be to PNG's advantage.

Systems thinking and sustainable development

Whilst the reductive thinking approach has served us well, it is now an opportune time for developmentalists everywhere to rise above specifics and begin to explore complexity in its entirety. This can best be done using a systems approach entailing both systems thinking and systems practice, following on from recent developments in soft systems thinking (Checkland 1993). The concept 'systems' embodies the idea of a whole rather than properties of component parts. The phrase 'systems thinking'

implies thinking about the world outside ourselves, and doing so by means of the concept 'systems'. So, while we would use systems thinking to order our thoughts, we would employ 'systems practice' to use the product of this thinking to initiate and guide actions we take in the world.

According to Checkland (1993:5), the systems approach is not readily recognised as a legitimate subject or discipline because its concern is not a particular set of phenomena, as is the case with chemistry or physics, for example; nor is it, like biochemistry, a subject which has arisen at the overlapping of existing subjects. Nor is it a subject which exists because a particular problem area is identified as pertinent and therefore warrants the bringing together of a number of different streams of knowledge – as in development studies or town planning, for example. Checkland notes that 'what distinguishes systems is that it is a subject which can talk about the other subjects, it is a meta-discipline whose subject matter can be applied within virtually any other discipline'. There is now widespread interest in the utility of the systems approach in the sciences, management sciences and social sciences. For instance, an increasing number of planning tools have been developed that incorporate rudimentary aspects of systems thinking. These include the project cycle approach to planning, the logical frame method, the participatory rural appraisal (PRA) technique, socioeconomic and environmental impact study techniques, and various stakeholder methodologies.

In laymen's terms, we take the systems as an approach to a problem which takes a broad view, which tries to take all aspects into account, and which concentrates on interactions or interconnectivities between the different parts of the problem. This also means that any component dysfunction is an aspect of systems dysfunction, that any system is an open system that evolves in a particular context (cultural, socioeconomic, political, ecological), and that causes and effects are circular rather than linear, and interventions into any part of the system affect the whole. In brief, our systems approach devotes attention to the whole, to the transactional process among the units of system, to the ongoing processes of information and feedback loops, and to repeated interactions and patterns inherent in a system.

Checkland (1993) recommends that any mind map of a problem must have an adequate root definition entailing at least five elements, abbreviated as CATWOE:

- the customers (C) of the system – beneficiaries or victims;
- the system's actors (A);
- its transformation process (T);
- the world-philosophy or *Weltanschauung* (W) – an outlook framework or image which makes the root definition meaningful; the ownership of the system (O); and
- the environmental constraints (E) to which it is subject.

So, for instance, if we were to translate this approach to a sustainable development problem in mining, fisheries or forestry, we would have to look at the effects on the actors; the aims and values based on culture and ethnicity; the relationships among actors and customers; communication and control; technology appropriateness or lack of it; the structure of the industry in terms of size and geography; and the macroenvironment – economic, infrastructure, political/legal, cultural/social, gender, health, globalisation, ecology and environmental regulations.

A systems approach to sustainable development in Papua New Guinea would be more akin to Melanesian thinking and the Melanesian worldview, with its emphasis on ensuring a balance between human activities and nature. A Melanesian is just as much linked to his/her physical environment (land, stones, forest, rivers and marine life, mountains) as to the sacred places of his/her god and the universe. These interconnectivities are reflected in the various practices of exchange obligation, producing a general state of subsistence affluence and acting as a form of safety net in the absence of welfarist policies. To the extent that this is useful, it forms a more positive aspect of the *wantok* system since this concept has come to be mainly seen nowadays as facilitative of bureaucratic and political corruption (de Renzio and Kavanamur 1999). Overall, systems thinking can help developmentalists to better evaluate the costs and benefits, both qualitative and quantitative, of development.

The case of Ok Tedi: An overview

To illustrate the utility of systems thinking and practice as an approach to sustainable development, the controversial case of the Ok Tedi mine is used.

The Ok Tedi gold and copper project was designed in 1976 and commenced operations in 1984. It is a large porphyry copper deposit in a very remote area of the Star Mountains of the Western Province of Papua New Guinea. The mine lies at an altitude of 2,053 m, in a very high rainfall area (850–1050 cm annually) and where seismic activity further contributes to geological instability. The result is local land movement and massive run-offs into the Ok Tedi and Fly rivers. The 76,000 sq km Fly River catchment has a population of about 50,000 people who, prior to the development of the mine, lived in separate hamlets and were mainly dependent upon hunting/gathering and fishing for their livelihood.

Total mine production averages 235,000 tonnes per day, of which 80,000–85,000 tonnes per day is ore treated through the mill (Hancock 1999). Ok Tedi Mining Limited (OTML) directly employs 1,900 people. Another 1,000 work for contractors and about 10,000 people live in the company township of Tabubil, while some 5,000 additional people have created settlements on the eastern edge of the town, outside the OTML lease area. The mine contributes about ten per cent to PNG's GDP and 20 per cent to its export income.

In its 15 years of operation, OTML has only paid ordinary dividends totalling US\$98 million in its 1998 and 1999 fiscal years on shareholders' investment of US\$1.9 billion (Hancock 1999:1). There were construction cost overruns that necessitated heavy borrowings. Between 1984 and mid-1999, taxes and royalties paid by OTML to the PNG Government, Western Province and landowners totalled K505.6 million.

Successive landslides in 1983–84 forced the abandonment of tailings dam construction in the Ok Ma area, after expenditure of about US\$60 million on the dam and associated infrastructure. This led to the PNG Government giving approval for riverine disposal. It also gave the monitoring responsibility of acceptable mine waste inputs into the Fly River system to OTML.

Of late, however, BHP has admitted to the following environmental impacts:

- Disposal of 700 million tonnes of waste rock and tailings material over 15 years has led to a build-up in the riverbed levels (aggradation) in the Ok Tedi and Fly rivers.
- As the bed levels rise (for example, by 4 metres at Tabubil in the Upper Ok Tedi), the frequency and duration of overbank flooding increases.
- More than 400 square kilometres along the rivers have been affected by vegetation defoliation or 'dieback'.
- Suspended sediment levels, containing copper not recovered by the mine, in the Ok Tedi and Fly rivers have increased significantly – five times higher than before mining began – and the concentration of copper in the sediments is about 30 times natural levels and could be toxic to the food chain.
- Fish livers from the Ok Tedi and Fly record high copper concentrations, and fish species and catches are down by 90 per cent in the Ok Tedi River from baseline levels and by 70 per cent in the Upper Middle Fly (Hancock 1999:6–7).

Given the precarious situation of the PNG economy and dependency signals from landowners, closing the mine would be a difficult decision. OTML has indicated it is willing to pay 'fair and reasonable compensation' for environmental damage. The dilemma at Ok Tedi was best summed up by BHP Chairman Don Argus in a recent shareholders' meeting in Melbourne: 'For Ok Tedi, the best environmental solution –

closing the mine – would have the worst social and economic impact – yet the best social and economic outcome has the worst environmental impact' (*The National*, 23 September 1999).

Application of systems thinking and practice to Ok Tedi

Although the Ok Tedi mine is involved in the extraction of a non-renewable resource, the proceeds from it could have been judiciously utilised to generate more sustainable projects had its various stakeholders thought along the lines of systems thinking. It would seem that stakeholders such as the Western Province and landowners, to whom Ok Tedi matters the most, have missed the opportunity to use mining royalties to put in place sustainable projects. Since 1984, royalties to the Western Provincial Government have totalled K42.8 million, and to landowners, K17.6 million. What is there to show that these monies have been put to good use? The PNG Government's royalty share totalled K21.9 million, in addition to K423.3 million from company tax, custom duties, withholding tax and income tax. However, in terms of providing services and infrastructure for the Western Province, its contribution has been 'absolutely nil', according to a communication officer of the Catholic Church in Kiunga (*Post Courier*, 23 September 1999). Likewise, pollution of the Ok Tedi and Fly rivers could have been minimised had the two major stakeholders, BHP and the PNG Government, not assumed perfect knowledge but made use of systems thinking at the conceptualisation stage. We now have the benefit of hindsight, of course, but it is worth noting that systems thinking has been around since the 1960s.

How would CATWOE be applied to the Ok Tedi case? The customers (C) are the local landowners, those dependent on the Ok Tedi and Fly rivers, and the people of Western Province. It is not clear whether these customers, who are now victims, had any initial input into the project. A PRA exercise would have partly served the purpose of involving them and could have yielded local knowledge on, for instance, past landslides, which might have then led to the selection of a more appropriate site for the tailings dam. What is clear, however, is that a significant number of landowners further down the Fly River who should have been compensated for river pollution were not covered by the special benefits package that was primarily for communities within the mining leases, leading to court action in Melbourne against BHP and OTML in 1994–95. This forced an out-of-court settlement of K500 million, enacted in the *Mining (Ok Tedi Restated Eight Supplemental Agreement) Act 1995* and the Mine Waste Management Project (1996) aimed at finding ways to reduce the amount of waste material entering the Ok Tedi and Fly River system. This neglect arose because BHP's initial preoccupation was to get the PNG Government onside as the key stakeholder in order to obtain favourable environment legislative exemptions, and to gain access to mining areas. According to Gibson et al. (1999:15), 'close ties and strong

communication links were thus a feature ... between OTML and the PNG Government, but these did not extend into the rights-based relationships with the local government representatives of clan chiefs and elders'.

The system actors (A) are the stakeholders, both direct and indirect. Direct stakeholders include the PNG Government (30 per cent), Canadian Inmet Mining (18 per cent), BHP Minerals Holdings (52 per cent), OTML, and the many thousands of owners of the two individual corporations as well as the people of Papua New Guinea. The government's interest is held on behalf of the nation (15 per cent), the people of Western Province (12.5 per cent) and landowners (2.5 per cent). Indirect stakeholders include the Australian Government, which had encouraged BHP to take up the PNG offer of project manager in order to fill the void left after political independence, and the World Bank, to which Papua New Guinea owes money, hence the pressure to keep the mine in operation in order to boost exports.

An analysis of the interconnectivities between the stakeholders would no doubt reveal that, despite the dismal experience of Bougainville, the PNG Government saw its relationship with BHP as of greater importance than that with the landowners and the environment. Indeed, it passed legislation for the project which, whilst including a requirement for the construction of a tailings dam, placed limits on the expenditure that BHP need commit. It also exempted mine development and operation from the conditions in two of its major environmental Acts covering planning and contamination. Gibson et al. (1999:9) rightly point out that 'an important alliance not formed ... was that between the developers and the environment. This was to be a crucial omission, as it was environmental issues that were to prove the most intractable problem for all of the other stakeholders.' A lesson to note here is that, 'by not being fully accountable to the less economically powerful stakeholders, the effects can rebound and affect the interests and rights of the perceivably powerful' (Gibson et al. 1999:23).

The transformation process (T) includes the actual management of Ok Tedi, communication and control issues, and the mine's evolution, generating effects both positive and negative. Was the process transparent, accountable and ethical? For instance, whilst financial returns have been gained by landowners, this stakeholder group, as a result of the lack of initial and ongoing consultation, has also expressed dissatisfaction (Gibson et al. 1999:17). Also, could it not have been possible to pipe tailings to a dam in a more stable location? If answers are not readily available, misleading information can be assumed, leading to a lack of accountability for full reporting.

In terms of Ok Tedi's *Weltanschauung* (W), was the initial root definition of conceptualisation of the mine meaningful? It seems that it was not because initial assumptions were wrong, meaning that the whole project was haphazardly thought out. The mine has instead been a burden to the key stakeholders, including the landowners whose damaged environment will take

up to 50 years to recover. As for the ownership (O) of the system, it is clear that landowners and affected communities have not been made to feel they own the mine. To their minds, the owners have clearly been the PNG Government and BHP. And finally, the environmental factors (E) have not been adequately evaluated. Instead, environmental regulations have been bent to suit the short-term goals of financial gain. The decision to close the mine or not is now being unfairly left to the PNG Government and landowners in the context of a precarious economic environment.

Conclusion

It is generally accepted that, in the pursuit of development, there are bound to be tradeoffs *vis-à-vis* environmental and socioeconomic costs. However, we contend that adopting systems thinking has the potential to minimise these and to prevent bad decisions. A whole range of projects in Papua New Guinea could benefit from this method, such as logging, which is currently in bad shape, and fisheries. Stakeholders in the Ramu nickel project also would do well to spend more time at the conceptualisation and design stages, because the proposed

offshore waste disposal clearly has the potential to damage the fish industry, given regular seismic activity in the project area. The environment ought to be brought to the fore as an important stakeholder. An appreciation of the interconnectivities between systems and subsystems could possibly prevent stakeholders from becoming caught between the devil and the deep blue sea.

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Past, present and future: Building on Papua New Guinea's customary strengths in resource management

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Introduction

Papua New Guinea's national constitution sets out the foundations of Papua New Guinea's belief in itself as a nation. It also sets out the principles whereby it will conduct itself, not only with other nations, but also internally with its own citizens. The nation's founding fathers understood clearly that one of the major elements common to all Papua New Guinea (PNG) societies was the control and management of rights over specific natural resources, and that major elements of such resource rights were accessed through the customary kinship systems operating from place to place. Thus the national constitution recognises and endorses the critical importance across the country of customary rights over resource control and management.

Despite such affirmations and its rhetorical repetition, much has taken place since independence in 1975 which has actively undermined PNG customary resource systems to the point where elected leaders (and others), most often in collusion with entrepreneurs and foreign interests, have sold rights to resources (for example, forests, fishing rights, mineral resources) for little long-term benefit for the majority of the customary resource rights holders. In contrast, any significant financial and/or material benefits have been for such individuals and their small support groups. Such actions would certainly lead in the long term to poverty for a majority of PNG's citizens while a very small proportion of the elite, often the political and educated elite, become very wealthy, safe in the cities and towns behind barbed wire fences and security guards.

Is this what Papua New Guineans understand by the term 'development'? Is this what ordinary Papua New Guineans think they are going to get when, after lots of promises and inducements (mostly the former), they agree to go along with plans for a logging project (for example) promoted and pursued by a particular political and/or entrepreneurial leader. The majority goes along with such plans because it wants not only some promised cash injection but also the supposed infrastructure accompanying such developments. Essentially, the majority wishes to enhance its quality of life and standard of living by means of such developments. In virtually all such cases, communities wishing such broad changes are left with a diminished and degraded environment, bush or forest characterised by poor regrowth from which little can be collected in terms of bush foods, for housing materials or as wildlife.

Such communities are usually also left with a legacy of mistrust, recriminations and divided communities as other outcomes of such resource 'development' projects.

On the basis of such manipulation, exploitation and lack of concern for not only the immediate economic but also the longer-term socioeconomic future, I outline in this paper some thoughts about Papua New Guinea's strengths and weaknesses, using a general SWOT analysis – strengths/weaknesses/opportunities/threats. I discuss the opportunities and threats that these strengths and weaknesses bring with them, focusing in particular on natural resources and their control and management. This discussion assumes that Papua New Guinea as a nation does have a vision of the kind of society it is striving towards; in this regard the national goals and directive principles set out in the national constitution remain in force as statements which articulate this kind of vision.

Strengths

Papua New Guinea's most neglected strength is its many customary social systems and their associated customary resource use, management and inheritance systems. These social systems have much better knowledge of the kinds of resources and their customary uses and the physical and cultural constraints needing to be observed in the long-term use of these resources. The levels of social groupings at which final decisions on resource use and management are made (for example, clans) are widely known, recognised and accepted at each local level. There are built-in customary avenues for the inheritance of resource-related rights, but there are also avenues to allow others to make short-term use of such resources. While there are some likely difficulties emerging in modern times with some aspects of such resource systems, there are relatively simple methods available for building new aspects onto such strong customary institutions.

The fact is that some 97 per cent of the country's area is governed by such customary systems and that the major resource rights are directed through particular levels of social groupings (for example, sub-clans, clans) which are widely known and respected within every local context across the country. This means that people prefer to keep such systems in place and operating to the benefit of the great majority of the population. In mid-1995, when rumours emerged of either

the World Bank or the state of Papua New Guinea taking over all resources in the country, there was a huge outcry – large demonstrations in a number of cities and towns across the country (including some deaths in the highlands). This depth of feeling was strongly in favour of retaining the current customary tenure systems, not for the kind of radical change which had been rumoured.

Such customary tenure use and management systems show a depth of knowledge and understanding of geographical and other variations by communities within any one locality. They also show the kinds of resilience and flexibility needed for such systems to adapt themselves to changing conditions and internal as well as external pressures which are being brought to bear on local communities and their resources.

Weaknesses

Customary resource use and tenure systems are now also exhibiting some characteristics which are becoming more evident in the modern Papua New Guinea. These include major problems in dealing with representation, that is, who can speak for or agree on matters on behalf of other individuals and/or social groups. This has become particularly evident in the forestry sector where deals made behind closed doors between a few individuals from an area and outside natural resource developers give short-term benefits (usually financial) to these few individuals but little if any long-term benefits to the majority of the other resource owners and significant long-term negative benefits to these communities.

A side effect of such concerted and targeted activity, as has been seen across PNG over the last 20 years or so, is the gradual separation of a small, often political, elite from the remainder of the population. Such an elite is tending to become much more urbanised, focusing almost entirely on its own benefits, its own security, its own advantages and leverage, to the detriment of broad based social and economic development for either fellow citizens and country generally, or for fellow clans-people from people's own home area.

Further, such natural resources are taken out of the project area, and most usually out of PNG, with no or very little commercial value added, with very little proper training of Papua New Guineans, and with very little (if any) long-term employment locally or other income-earning opportunities from such resource exploitation exercises. In other words, there is no long-term view in this kind of exploitation or resource owner manipulation exercise. Despite there being such a stated national goal, there appears also to be no interest in, or fostering of, sustainability so that there might be ongoing bases for improving services and infrastructure for the majority of the population, providing employment or income opportunities and thus improving lifestyles and living standards for the majority of the PNG population.

Opportunities

PNG has the opportunity to bring about improved standards of living for the PNG population. First, PNG as a state, and its constituent communities, need to have a vision of what is or is not possible. This vision can be articulated and realised in various ways.

Second, PNG societies have strengths within them which should be fostered and built upon. By such an approach modern PNG societies are able to take better advantage and make use of modern structures, sharing of information, technology, communications, and markets in order to build such livelihoods, which will depend to a very large extent on sustainable management of the various natural and human resources within its borders. Thus the second task will be to find appropriate strategies to use to put into practice such an overall vision, as well as inclusive ways of implementing such strategies in transparent and equitable ways.

PNG's various kinship systems, which regulate relationships between people in local societies as well as the practice and inheritance of natural resource and other rights, is one such strong system, an 'opportunity' to be built upon. Customary natural resource tenure and use systems are another such system to be fostered and developed further, as is the evident strong relationship between people and land. PNG does not need to replicate Western systems of individualisation of land and tenure systems in order for land or other natural resources to be used productively and sustainably. Is the Western focus on individualisation and the commoditisation of all manner of things a trend which will be of unquestioned benefit to PNG? What values do PNG as a nation, and communities within it, wish to maintain and work towards? Current PNG customary social systems pay much attention to responsibility for, and care of, other people; the young and very old are part of such systems and not segregated out and institutionalised.

PNG as a nation, and locally based customary societies within the nation, may choose to retain what elements and values they wish to retain and have the opportunity to build upon those in the development of a Melanesian way. The Land Groups Incorporation Act, which came into law in 1974, is one avenue whereby such building on strengths can take place. This Act, through a specified process, gives modern legal recognition to customary social groupings (such as 'clans') which operate at the level at which major resource management decisions are made. Further, since customary resource use, tenure systems, and the rights and responsibilities inherent in them are invariably based at the local level, to further strengthen such locally based approaches and strategies is common sense and should develop a synergy of its own with other recent top down developments. These locally based approaches and strategies, in addition, coincide very well with recent reforms of PNG's Organic Law which not only reinstate and strengthen local-level government but also are intent on devolving more responsibility to the local level.

Such devolution, however, needs to be handled with care and should arise out of a community's (or a group of communities') stated concerns of better managing their natural and human resources within the framework of a modern PNG which is itself subject to not only internal but also external pressures brought about by globalisation. One critical element of this is the area of information and communications (see below).

Threats

As noted above, one of the threats facing PNG as a nation is the gradual stratification of society. This has begun to take place, partly through education, through the effects of corruption at various levels and by differential access between urban and rural areas to resources, infrastructural support and communications. Thus the gap between rural areas, where the vast majority of people live, and the urban areas appears to be widening. This gap is symptomatic of the problems of PNG as a state being able to provide support and infrastructural development across the nation as a whole. A major danger lurks behind arrangements in the recent past and in the present by which a few individuals manipulated larger groupings of people (for the individuals' own short-term benefits). Attention needs to be paid to maintaining the integration of the rural and the urban spheres of PNG society.

In addition, a focus on short-term goals – a characteristic which has stood PNG's customary societies in good stead in the past – has also become problematic. In the past, individuals and groups had, for their own survival, to take advantage of whatever was available from time to time, that is, a large harvest of yams or bananas, a large pig kill, and so on. This is certainly one way of dealing with natural resources. However, with increasing populations and increased modes of harvesting natural resources, the approach of quick, short-term and often individual benefits needs now to give way to developing longer-term benefits which can provide a much broader benefit to a larger group of people. Thus individuals arranging for a foreign logger to come in and log out an area now need to take a much broader, long-term and sustainable approach to such a development. Questions asked and answers worked out need to include: who will benefit, how will they benefit, what spin-

offs are there in terms of health, education, living standards, local value adding, local employment, and so on.

Conclusion

There are a number of strengths, weaknesses, opportunities and threats in Papua New Guinea at present in relation to the management of natural resources. Strengthening and building upon customary strengths offer more equal benefits in the management of natural resources.

A critical element of such an approach of strengthening the customary institutions which exist at the local level is that of information and communications. Often, the mode of development undertaken has been on the basis of one particular kind of development (for example, 'our' logging project) rather than local communities being able to make their own choices across a range of natural resources in their area. Promotion of a single type of resource development can therefore be seen to be not for the development of a particular community or area but in the interests of a few individuals and their foreign partner(s).

Natural resource management options can range from a one-resource exploitation (for example, logging) to conservation of particularly scarce or threatened species, to the combining of a number of different options. All of these have their own strengths, weaknesses, opportunities and threats. So communities – who, after all, control the rights to, and must exercise the responsibilities for, these resources – need to have access to such information in order to make educated decisions about their natural resources and how best to manage them in sustainable ways for the benefit of their own communities and for their descendants.

The question is how to develop a body of relevant information on natural resource management options and how to find ways of enabling communities across PNG to get regular access to such information. Further, effective communications systems are needed so that interested communities can follow up on the basic information presented and find good markets for what they do produce themselves.

Underlying this paper is a subtext of re-empowerment of communities across PNG to understand and manage their natural and human resources in such ways as to best benefit not only individuals but also communities.

Maintenance of crop diversity and food security in rural Papua New Guinea: Case studies from Cape Vogel and Goodenough Island

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Introduction

This paper discusses strategies for ensuring food security by maintaining crop diversity in two different communities in Milne Bay, Papua New Guinea (PNG) – Bogaboga village on Cape Vogel and Utalo village on Goodenough Island. The discussion focuses on the maintenance of crop diversity and its contribution to local food security. It uses some examples of coping and recovery strategies observed at the height of, and after, the 1997 drought to illustrate the need for maintenance of local crop diversity. It is argued that maintaining high crop diversity is one crucial way of reducing the risk of food insecurity and that reliance on government assistance can be detrimental to long-term food security.

Two factors that affect food security in these areas are access to government services and climatic conditions. Government services, directly or indirectly, influence food availability through economic means. Climatic factors allow physical access to food and are a critical factor influencing food security.

Bogaboga is greatly influenced by government services. It has an airstrip nearby, close access to a good health centre, a school, and trade-stores which are regularly serviced by trading boats. The average education level is grade 8–10 and the life expectancy is around 75 years. Utalo on the other hand is somewhat isolated from government services and regular trade. The average level of education for children is grade 2 and the life expectancy is a maximum of 50 years.

Goodenough Island and Cape Vogel are both prone to drought. Several drought periods have been recorded: 1899–1901, 1911–12, 1946–47, 1957–58, and 1997–98. The drought in 1997–98 was comparable to the most severe drought of the 1940s.

Because of the marked seasonal differences, the fact that rain periods can be variable from one year to the next, and the history of severe droughts, food security is an important issue on Cape Vogel and Goodenough Island, both at normal times and during prolonged dry seasons. Rainfall is a determining factor of what foods can be grown and are available.

Food security in context

Food security is a much debated and confused concept. It has variously been defined as 'the availability at all times of adequate

food supplies of basic food stuffs', and 'access of all people at all times to enough food for an active healthy life'. Another broad definition is 'the ability to acquire enough food to satisfy minimal nutritional requirements at national, community and household levels'. The Food and Agriculture Organisation states that 'food security at the individual, household, national and global level ... exist when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'. This concept of food security has to be differentiated from that of food self-sufficiency. Food self-sufficiency is when enough food is produced by a household or a country for its own consumption. A high degree of food self-sufficiency is not necessarily a precondition for food security.

In Papua New Guinea, rural villagers produce the bulk of their food for their own needs from subsistence agriculture, while those in urban areas depend largely on imported foods such as rice and flour. Food security in subsistence communities such as Bogaboga and Utalo is ensured through their own food production system, by maintenance of crop diversity and through social networks.

Food production systems

Crop diversity

In many of the gardens at both Bogaboga and Utalo there is very high crop diversity. In any one garden, one may find up to 30 or 40 different crop species for consumption. However the following discussion focuses on basic starch or staple foods. The staple foods on Cape Vogel and Goodenough Island depend on the time of the year or which garden you visit. Both areas have four or five major food crops as staple. These are the ones that contribute most to daily consumption and are those most highly valued culturally within the society. At Cape Vogel these are two types of yam, *Dioscorea alata* and *Dioscorea esculenta*, and banana and sweet potato. In periods of little food availability, sago is important. On Goodenough Island, taro is most important and cassava is also important.

There are various types of gardens at Utalo and Bogaboga. The main types consist primarily of yam and taro, banana and sweet potato, and cassava and sweet potato.

Gardens primarily for yam and taro on hill slopes

In Utalo, yam gardens are cleared annually, with yam planted in the September/October period generally on hill slopes. The first lot of taro is also planted during this period, by itself or with yam. The taro benefits most from mixed planting as it gets more attention from weeding. Most taro gardens do not get priority in weeding, whereas yam does. Bananas are planted as borders between yam and taro plots. The second-year crop in these gardens is a mixture of sweet potato, banana and cassava. The last crop planted in the third year, often left when the garden is abandoned, is mainly cassava and pitpit. The variety of cassava is called *fiti*. The average fallow period in these areas is 15 years or more.

These yam and taro gardens are culturally the most important gardens. They are the main source of yam and taro for giving away as well as for household consumption. Usually a family or clan will cultivate a locality for five or six years before abandoning it for a new locality. A high use of magic and restrictions apply to the garden in its first year.

At Bogaboga, yam gardens are usually planted around October and early November on hill slopes. They too are important culturally. Little taro is grown at Bogaboga.

Gardens on flood plains: Banana and sweet potato

Banana gardens are made both at Utalo and Bogaboga in areas of flat or gently sloping, young bushland. At Utalo these gardens are made closer to the village. They are dominated by bananas, with cassava, little sweet potato (at Bogaboga), taro hongkong, aibika, and tomatoes. Even though the gardens are abandoned after two years, bananas remain productive for the next five years. The fallow period is five years. Bananas in these gardens are for giving away as well as for household consumption. These gardens complement the taro and/or yam gardens as sources of food.

Cassava and sweet potato gardens

These gardens are made on cleared grassland, mainly areas on the riverbank. The gardens are abandoned once the cassava and

sweet potato are harvested, usually within nine months, and left fallow for two years before the area is used again. The food in these gardens is primarily for household consumption. These gardens serve as a convenient source of food before a trip to the main gardens.

The most important source of food is from the yam and taro gardens. Both types of gardens have to be made annually. All household units produce both these gardens annually and maintain different levels of succession of each.

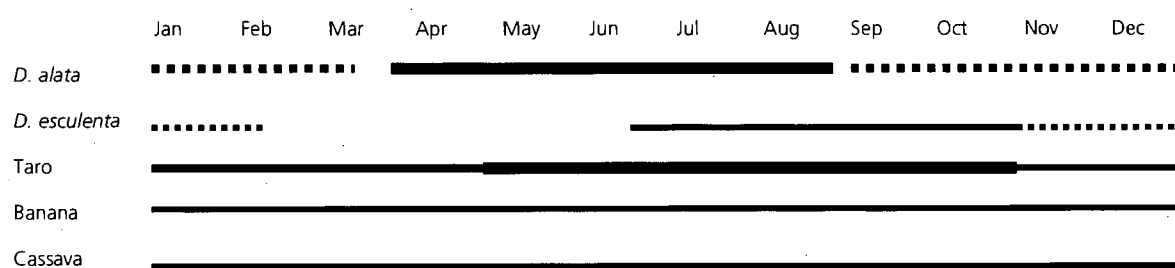
Food availability

Figures 1 and 2 show what foods are generally available throughout the year at Utalo and Bogaboga. The thick black line indicates continuous supply from the gardens. The broken line indicates that food is taken from storage. For yams the continuous supply can be extended depending upon the number of varieties people are cultivating. Yams are important during dry periods and periods of drought because they can be stored. Taro and banana play an important role, but both are very dependent upon water availability. In dry periods or drought, taro are the first to die, followed by bananas, and food dependency is based mainly on yams, sweet potatoes and cassava. Cassava is not a high status food. People in Cape Vogel will not eat cassava unless they are really desperate. At times of food scarcity, cassava is the main source of food at Utalo. Sweet potato is eaten very little around Utalo.

Diversity of cultivars

High crop diversity is important as it ensures food availability throughout the year. Within some of the crops one can observe high diversity of cultivars (Table 1). Some cultivars are grown (shared) in both villages. Local knowledge is crucial to maintaining cultivation and conservation of this high crop diversity.

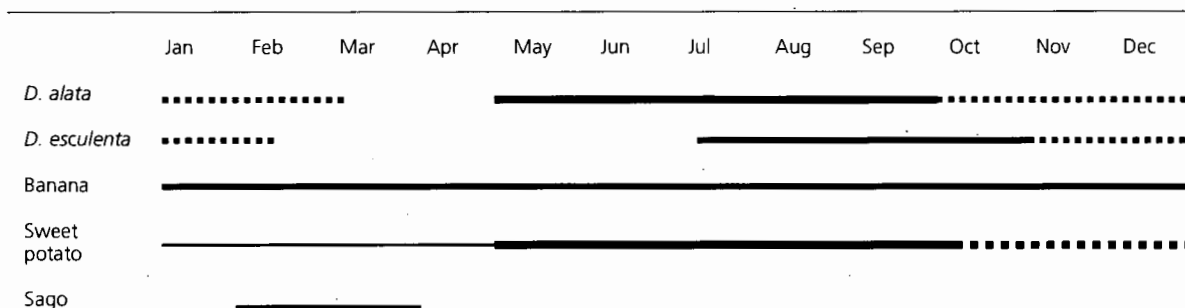
Figure 1 Food availability, Utalo, Goodenough Island



The thickness of the bands indicates volumes available. Different varieties of yam mature at different times and have differing storage abilities.

Thick solid line: directly from gardens Dotted line: storage

Figure 2 Food availability, Bogaboga, Cape Vogel



The thickness of the bands indicates volumes available. Different varieties of yam mature at different times and have differing storage abilities.

———— directly from gardens storage

Table 1 Numbers of different cultivars of important food crops grown in gardens, Utalo and Bogaboga

	Utalo	Bogaboga	Shared cultivars
Banana	22	15	4
Taro	42	10+	10
Yam (<i>D. esculenta</i>)	12	25	1
Yam (<i>D. alata</i>)	24	24	10
Cassava	7	5	
Sweet potato	5	10	

Numbers reflect the abundance of different cultivars in the gardens

Even though each crop shows many cultivars, within taro and banana garden plots the most productive are the most abundant. For example, only two or three cultivars are dominant, while most of the cultivars occur in very small numbers. These dominant cultivars are high producing cultivars used in everyday consumption as well as for exchange purposes. Small numbers of other cultivars are maintained in reasonable quantities as an insurance against drought, whilst the rest of the cultivars are maintained for 'sentimental' reasons.

Taro at Utalo and *Dioscorea alata* at Bogaboga illustrate well the diversity and abundance of the various cultivars. At Utalo, villagers identify 42 different cultivars of taro. Three dominate the gardens, and one other cultivar is quite significant. Five per cent of the garden is often occupied by the *kwadogana* cultivar. The name literally means 'saliva'. When this variety is eaten, it makes the mouth water. Although at normal times people do not eat this variety, they always grow it in moderate numbers.

Kwadogana can survive drought and is available in severe dry periods. Growing it is an insurance against drought.

This high diversity is also reflected in gardens of the yam *D. alata* at Bogaboga, where all varieties occupy a more equal area of the garden. Fifty per cent of *D. alata* are planted in large numbers covering an equal amount of area. This is because the yam cultivars have varying degrees of storability. Some store longer than others and go straight into storage, while others are eaten immediately at harvest. More cultivars of yam are grown in moderate quantities to ensure longer periods of stored yam availability. These practices ensure greater food security as a lot more different yams are growing.

Seven known cultivars of cassava are cultivated in Utalo. All cultivars have varying degrees of maturity, and cassava can be eaten all year round if constancy of planting is maintained. Although cassava is available in Bogaboga, it is not a status food, so not everyone grows it, let alone eats it.

It is interesting how people regard their own, traditional cultivars as completely different and separate from introduced cultivars (Table 2). People know what has been introduced from elsewhere. The outside cultivars are often named according to their source – for example, there are cultivars of yams called *Kiriwina*, *Misima*. The higher number of introduced cultivars in Bogaboga reflects its greater access to the outside world, Utalo being very isolated.

In Bogaboga in the last ten years, rice has made up a large component of meals. This is partly due to an increase in tourism in the region, which allows the locals to participate more in the cash economy from sale of craft. Some families receive small remittances from family working in the cash economy. With cash, people can buy rice or yams from those still cultivating yam.

Table 2 Numbers of crop cultivars identified and proportions of introduced cultivars

Cultivars	Utalo	Bogaboga
Taro	42	10
Introduced (% of total cultivars)	2 (5)	10 (100)
Yam (<i>Dioscorea alata</i>)	24	26
Introduced (% of total cultivars)	1 (4)	5 (19)
Yam (<i>Dioscorea esculenta</i>)	12	23
Introduced (% of total cultivars)	2 (16)	7 (30)
Banana	22	15
Introduced (% of total cultivars)	5 (23)	6 (24)

Social networks in food production and redistribution

Social networks are critical in food production, maintenance of crop diversity and food redistribution in Papua New Guinea, and serve to provide food security. Traditional knowledge and skills play an important role in maintaining and conserving plants for food, as well as for medicines, housing materials and a multitude of other uses. Plants and people are inseparable in PNG village societies.

Clans garden together to ensure communal sharing of food. Different types of gardens are made, either communally or individually. Different dominant crops are often grown in each garden type. Clans have alliances and reciprocity is common. Important occasions are set aside to release and redistribute food. Feasts are held and food is shared at harvest time and after planting

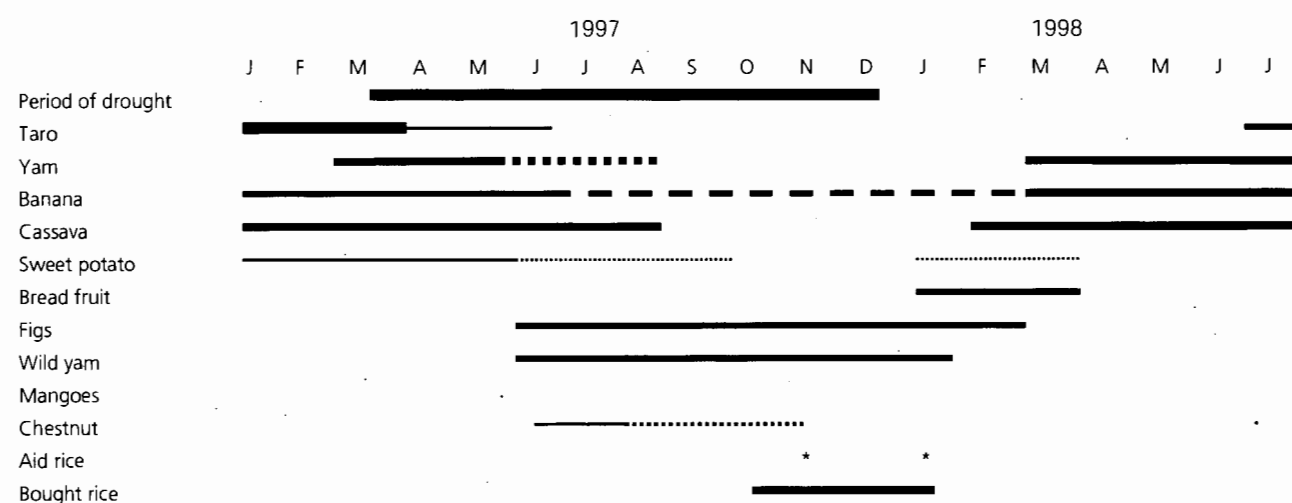
– for example in the December/January period and around March – to get rid of all the food from the last harvest. This sharing and reciprocity ensures general food security at all times, good or bad.

Food availability in drought and the recovery period

Figures 3 and 4 show what foods were available during the severe drought of 1997–98 at Utalo and Bogaboga. In both areas the drought started toward the end of March 1997 and whilst the first rains came in December 1997, heavy rain did not start until January 1998.

At Utalo, when the rains stopped in March 1997, most of the taro plots died, but small amounts of the drought resistant *kwadogana* taro remained available for a short while. The yam harvest was not so good. Very little was stored. Up until June, most came from the gardens; stored yam was available until September. However cassava served as a major food source and was available for quite a while, particularly that growing wild and in abandoned gardens. Wild yams and figs provided a further food source throughout the drought, and in early January 1998 breadfruit became readily available. In August and September people harvested their copra, which they sold in Alotau (provincial capital). This allowed them to buy about 1 kg of rice per family, which helped sustain them until January 1998. They received very little aid rice because of their isolation. After the rains came in January 1998 the gardens – particularly yams, banana and cassava – all grew rapidly and recovery was quick. Planting materials had been maintained. By the end of March and April,

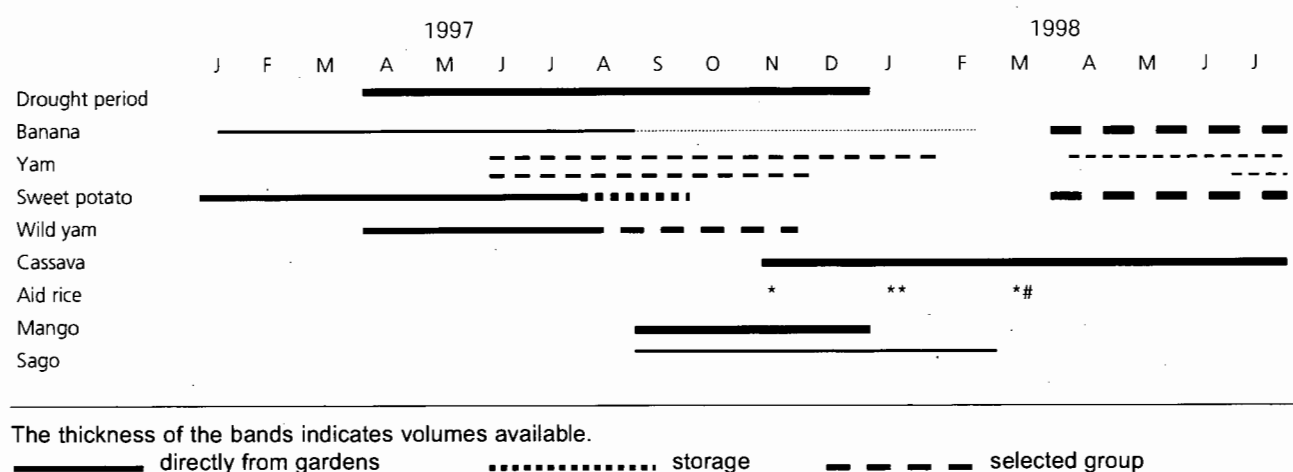
Figure 3 Food availability, Utalo, Goodenough Island, 1997–98



The thickness of the bands indicates volumes available.

———— directly from gardens storage - - - - - selected group

Figure 4 Food availability, Bogaboga, Cape Vogel, 1997–98



food was once again plentiful, with people feeding sweet potato and pumpkins to pigs.

At Bogaboga, most yams and bananas failed as soon as the drought set in, with some available only from a few well-maintained gardens. People ate sweet potatoes and wild yams, and then sago. Aid rice was provided and people were still living off this well into 1998. For the latter part of 1997, mangoes became plentiful, and indeed over-abundant. People ate no cassava during the drought, although they planted and ate it during the recovery period from January 1998. Even in early 1998, many people had not made new gardens because they had become confident that aid rice would continue to be provided. Much growing and seeding stock was lost in the drought. Most people had abandoned their food and yam gardens and returned to the village. By October 1998, only 12 out of 80 households of about 350 people had reestablished good yam gardens. Recovery should have been much quicker by having a large number of cultivars. At Bogaboga, people had not only lost a lot of planting materials but also stopped making their gardens, particularly the most important ones of yams and bananas. Bogaboga people had relied on the assistance of aid rice. This resulted in dependence on the outside, cash economy for food, which in turn hindered recovery.

Conclusion

Because of climatic conditions in Utalo and Bogaboga, food security is a real issue. In normal times, by maintaining high diversity of a large number of cultivars of all crops, not just the main staples, they are assured of having sufficient food all year. Food is generally available through growing or storage, even in the drier periods.

However in the severe drought of 1997, both communities faced a crisis in food security. The Utalo people who were more isolated, and hence self-sufficient, had their own drought resistant taro cultivar, and then survived on wild cassava, wild yams and figs and received very little aid rice and government assistance. They maintained their planting materials. When the rains came their recovery was quick. However the situation at Cape Vogel was different, despite the risks of food insecurity being similar. They relied on government assistance and outside help. Planting materials and gardens were not widely maintained. Recovery has been slow. Their ability to access government services has most probably hindered their ability to recover quickly.

This leads to an important question: how much outside help should a village community rely on before it interferes with traditional food production systems? By relying on outside help, and by losing diversity, the communities place themselves at a greater risk of long-term food insecurity.

Coastal fisheries development in Papua New Guinea: An opportunity for economic development in coastal communities

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Introduction

Papua New Guinea (PNG) has a population of about four million people. Of its 20 provinces, 15 have maritime elements. Collectively, the coastal peripheries of these provinces constitute an Exclusive Economic Zone (EEZ) of 3,120,000 sq km (Pernetta 1990) and a coastline of 17,110 km (Bualia and Sullivan 1990).

Since independence 24 years ago, the economy has become heavily dependent on the mining sector because of the attractive total return in revenue. However, mineral resources are non-renewable and the average life span of a sizable mineral deposit in Papua New Guinea is about 20–30 years of continuous mining. Unless suitable economic policies for the re-investment of mineral revenue are put in place, the total reliance on this sector may not be economically sustainable in the long term.

Since the early 1990s, the country has been experiencing tough economic times. The closure of the Bougainville Copper Mine in 1989 was the initial trigger for the subsequent unstable macroeconomics, followed by a lack of control of fiscal management in 1994 (Mawuli 1996). Subsequently, the kina was floated by the Chan Government and its exchange rate against major currencies has been declining precipitously ever since.

A balance between developing mineral and petroleum resources and renewable resources such as agriculture and fisheries is essential for PNG's economic growth and independence. Such an approach would diversify and strengthen the formal economic sector, and also make economic development accessible to rural and subsistence communities. This is important because the majority of Papua New Guineans have a subsistence lifestyle. Many PNG societies are founded on principles of self-reliance, communal cooperation, and individual and family prestige. With proper economic infrastructures, financing schemes, and appropriate extension services from government, educational, research and financial institutions, their capacity to contribute economically to PNG's development can be enhanced.

Given the country's marine setting and the size of its EEZ, further development of its coastal fisheries resources has the potential to contribute to such a mutual goal. I will analyse in this paper how this could be done to benefit the country's economy, as well as making economic opportunities available to its coastal subsistence communities.

Status of the fisheries sector

Harvest of natural stocks

The fisheries sector in Papua New Guinea is based largely on harvesting natural stocks. The subsistence sub-sector relies mainly on coastal and estuarine species, and the commercial sub-sector harvests the lucrative offshore pelagic tuna stocks, and some coastal species such as prawns and lobsters, largely from the Gulf of Papua.

Average total annual coastal fisheries production between 1989 and 1994 has been estimated at 25,554 tonnes (Dalzell et al. 1996). For the period 1993–97 the average total landing from the migratory offshore tuna stocks by the longline and purse seine fisheries, largely from the Coral Sea and Bismarck Sea, respectively, was 12,185 metric tonnes (Lawson 1998). Adding the two averages suggests a total annual harvest of 37,739 metric tonnes from PNG's EEZ. However, the landings reported in Dalzell et al. (1996) were from only a few locations for which data were available. There is also a lack of effective surveillance and reliable records of landings of pelagic species from ships licensed to fish within the EEZ. The results of an analysis of tagging data obtained for skipjack tuna in the early 1980s in the central and western Pacific (PNG waters included) indicated an overall low harvest rate for this species (Kleiber et al. 1987). Based on this scenario, the potential average annual landings could be 2–3 times higher than 37,739 metric tonnes.

For coastal species alone in the period 1989–94 (Table 1), the proportions of mean annual tonnage harvested by the two sub-sectors were 81 per cent (subsistence) and 19 per cent (commercial). The proportion of the value in US dollars was 65 per cent and 35 per cent, respectively. These figures indicate that the commercial sub-sector is contributing nearly half as much value as the subsistence sub-sector from only a quarter as much coastal species production. As the table shows, this situation is similar in other Melanesian countries in the South Pacific. Because not all of the harvest by the subsistence sub-sector is usually sold, the value is based on the expected average value of the products if they had been sold at a commercial outlet (Dalzell et al. 1996).

Much of the data for Papua New Guinea (Table 1) is based on landings from Kavieng, largely from the Tigak Islands, Western Manus and Port Moresby. These figures would double or triple if such data were available for other areas rich with

Table 1 Average production and value of coastal species, 1989–94

	Subsistence fisheries		Commercial fisheries	
	Production (t)	Value (US\$)	Production (t)	Value (US\$)
Papua New Guinea	20,588	41,176,000	4,966	22,096,908
Fiji	16,600	45,767,395	6,653	18,340,043
Solomon Islands	10,000	8,405,660	1,150	4,343,811
New Caledonia*	2,500	9,000,000	981	3,968,650
Vanuatu	2,045	1,953,360	467	1,514,364

Note: *Still a territory of France.

Source: adapted from Dalzell et al. 1996:Table 27

coral reefs and associated species, such as Milne Bay, New Britain, Bougainville and the northern region of the mainland (Momase region). Papua New Guinea therefore needs to work towards mechanisms by which additional production available to the subsistence sub-sector can be mobilised into the commercial sub-sector, at least at the provincial level.

Besides coral reef species, there is potential also from species found in the estuaries of numerous rivers occurring on the mainland and many of the larger islands, especially those with well-developed mangrove communities. Mangroves serve as nursery and refuge habitats for many fish and invertebrate species. Good examples are the estuaries associated with the Sepik, Ramu and Markham rivers to the north, and the Fly, Strickland, Kikori and Purari to the south of the mainland. Barramundi and prawns, commercially harvested in the Fly River and the Gulf of Papua, respectively, benefit during their early life history stages from these southern estuaries.

Potential for aquaculture

Currently, PNG's fisheries harvest is mainly based on natural stocks. Theoretically, there is potential for culturing some coastal species, given a firm understanding of their biology, ecology and life history. Barramundi and prawns would be good candidates to start with because there are current commercial markets for them. Furthermore, these species utilise estuaries as nursery grounds that can be natural sources of juveniles for rearing systems. With experience and success, such an undertaking could be expanded to utilise captive brood stocks (parents) as sources of juveniles.

This idea is not new in Papua New Guinea. There is some research on trout farming currently being done in Aiyura by the Department of Fisheries and Marine Resources. Trout is not indigenous, and this work is based on imported juvenile trout (fingerlings), perhaps from New Zealand. Being air freighted, they arrive in Papua New Guinea carrying a price tag way above the cost incurred at the larval rearing facility overseas.

If aquaculture is going to be economically feasible, suitable local species have to be identified. This would also eliminate

the need to build technologically sophisticated facilities compatible with ambient environmental factors suitable for maintaining brood stocks and rearing larvae and juveniles. With the collaboration of the country's research institutions, and appropriate long-term fisheries development policies, aquaculture projects could be funded and sustained, and the results transferred to farmers (aquaculturalists) through relevant extension programmes. Universities are becoming expensive to run, and their involvement in such applied research would enable the government to obtain, besides professional manpower training, some direct economic return from its investment.

Ways to increase coastal fisheries production

Development policies, infrastructure and services

As in any system, developmental initiatives require appropriate inputs before there are outputs. If the goal is to achieve an increase in overall production from the fisheries sector, and simultaneously to facilitate sustainable economic development in coastal communities, the government requires appropriate long-term fisheries development policies. Most importantly, such policies must consider the provision of infrastructure such as transportation, electricity, and marketing outlets, and services such as financing schemes and extension programmes by relevant government agencies and universities, if this goal is to be realised.

A review of the Fisheries Act 1994/Fisheries Regulations 1995 (Independent State of Papua New Guinea 1994/1995) indicates that sections (5) and (6) of the Fisheries Act have provisions to accommodate such initiatives. They contain the framework within which specific fisheries development policies can be formulated and implemented. Under this framework, policy directives come from the Fisheries Minister and the National Executive Council, and are implemented by the National Fisheries Authority, whose goals and functions are defined in the above sections of the Act, respectively.

Politics in Papua New Guinea is dynamic and appointments to ministerial and departmental posts are often short term. Consequently, the government seriously needs to consider legislative mechanisms to protect legitimate development policies, once approved. This would make the planning and execution of developmental initiatives effective in achieving the desired results. Decision making in parliament would then not be just a 'pass-time' but a process with vision for development.

Development of a strong artisanal sub-sector

'Artisanal' fishing means that a portion of the catch is sold. Besides supporting their families nutritionally, fishermen (a generic term that includes women) also bring in cash to meet other family expenses. Establishing a strong artisanal sub-sector would bridge the subsistence and commercial sub-sectors, channelling production from the former to the latter. With

appropriate infrastructure, these catches could reach markets in the nearest major provincial town and fetch higher prices. Also, innovative buyers could value add by reprocessing. For example, species such as grouper, snapper and emperor are good candidates for filleting for fish and chips outlets, popular in large urban centres like Port Moresby. If a constant supply and a profitable marketing strategy were worked out, such local products could replace the overseas products that presently sustain these outlets, filling a niche in the country's economy. Overall, this would minimise imports and thereby contribute to strengthening the economy.

The Investment Promotion Authority (1999) has recently released a CD-ROM *Fisheries resource manual*, with the aim of attracting investment in the commercial fisheries sub-sector. Such information sources are useful in creating awareness among potential investors and harvesters, and can facilitate the establishment of possible joint venture projects to bridge the two sub-sectors.

There are disadvantages in such developments, too, especially when financial incentives encourage progressive increases in fishing effort. Due to low reproductive rates and strong territoriality in distribution among coral reef fishes, and tight nutrient recycling and longer food chains in coral reef ecosystems (Birkeland 1997, Russ 1991), reef fish populations can be easily decimated by increased fishing pressure. However, with good scientific knowledge of the biology and ecology of targeted species, and the encouragement of local communities in their traditional conservation practices within the scientific framework of resource management, this problem can be controlled. Since many coastal fishing grounds are owned by local inhabitants, involving them in policing and dealing with violators of established regulations has the advantage of giving them a sense of ownership and responsibility for their resource. It is important to be aware of these issues and to take the necessary precautions when formulating appropriate policies.

Considerations for sustainability

For artisanal fishing to be sustainable, three important aspects need to be considered. First, in order to harvest sufficient quantities, suitably process them and transport them to more distant markets, artisanal fishermen will require relevant training by extension personnel from government agencies or universities.

Second, in order for them to have the capacity to meet the necessary costs involved in this process, they must have access to financing facilities. A suitable policy directive from the government through the commercial banking system, especially state-owned banks such as the Papua New Guinea Banking Corporation, would serve this purpose well. Currently, the lending policies of banks and their high interest rates are already difficult enough for many borrowers; securing small loans may be impossible for artisanal fishermen. Another means of financing would be through attractive economic policies for the participation by the private sector in joint ventures, as mentioned earlier.

Third, although harvesting natural fish stocks is renewable, as with many biotic resources, proper monitoring of harvests and advice on management strategies are necessary to achieve long-term sustainability. Fisheries based on coral reef ecosystems can be easily constrained by continuous removal of biomass through harvesting fish stocks, rendering them unsustainable in the long term if not managed properly. This problem has been demonstrated experimentally in the Philippines (Russ and Alcala 1989) and in Jamaica (Koslow et al. 1988). Therefore, mechanisms for proper ecosystem and stock management have to be developed by the country's fisheries scientists and incorporated as part of the initiative to boost coastal fisheries production in the commercial sub-sector.

Conclusion

There is potential for an expansion in PNG's fisheries sector by increasing the focus on harvesting coastal and estuarine species artisanally. Unlike offshore pelagic fisheries resources, no sophisticated fishing technology, specifically trained personnel, or large capital investments are needed to harvest these species. These conditions are conducive to active participation by coastal subsistence communities to enhance their own economic capacity, if suitable long-term fisheries development policies are in place, and appropriate infrastructure and services are readily available to them. Developmental assistance from donor agencies, if available, should be channelled into such integrated developmental initiatives, rather than into isolated projects with limited potential for achieving long-term developmental goals.

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Greater autonomy for provinces: A strategy for meaningful development for Papua New Guinea

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Introduction

Given the diverse characteristics of Papua New Guinea and the important role that the provinces play in the affairs of the country, granting greater autonomy to the provinces would be a fitting development strategy. Current political and administrative practices demonstrate clearly that the needs of the country cannot be met by a system that concentrates power and authority with the central agencies. The provinces have the basic infrastructure to exercise greater autonomy in generating revenue, controlling resource development, establishing development needs, determining allocation of resources and implementing plans and programmes.

Papua New Guinea (PNG) is a country founded on villages, which contain about 85 per cent of the population. The spread of modern influences is changing the characteristics of the villages. The permanency of village culture will depend on the people having a greater and meaningful involvement in creatively responding to the challenges of development. Greater provincial autonomy would assist in this task.

Background

Throughout the world, technological advances are removing national boundaries and making the world smaller. Multinational corporations do business across borders. The survival of nations involves relying on other countries for essential items, such as food and water. Electronic commerce makes worldwide transactions instant and very easy. Within nations, demand for identity and autonomy is increasing. The former Soviet Union has broken up, making way for independent republics. In Britain, Scotland has achieved autonomy while Northern Ireland continues to seek an acceptable solution. In Canada, Quebec is at the forefront of greater autonomy. In our region, East Timor has just voted to be independent, sending hopes to Aceh, Irian Jaya and other provinces of Indonesia. Within Papua New Guinea, a section of Bougainville advocates independence while the national government offers autonomy to Bougainville.

Papua New Guinea is a country rich in natural resources. The sea is endowed with marine life that attracts interests ranging from tuna industrialists to game fishing and underwater naturalists. The forest is abundant in timber, flora and fauna, whetting the appetites of loggers and environmentalists. Beneath the soil are copper, gold, petroleum, gas and other minerals,

attracting large investments into the country. And the land continues to sustain village life and commercial agriculture.

Yet the country is ranked among the least developed by the United Nations Development Programme. Human development indicators are among the lowest, and the health of mothers and children among the worst, in the Pacific region.

Villages are sparsely spread throughout the length and breadth of a land characterised by a challenging remoteness because of its mountains, valleys, swamps, rivers and seas. Between 80 and 90 per cent of the population live in the villages, and their once-extreme isolation is being shattered by the influences of the modern sector. The quality of life varies from village to village: some people dwell in simple bush shelters and live on basic food harvested from the land and the sea around them; others live in high covenant houses with electricity, running water, television and telephone and buy food from supermarkets and town markets.

The diverse nature of PNG society was a factor in the adoption of a decentralised system of government during the dying phases of the colonial administration. The administrative constructs of districts provided the structure upon which the provincial governments were established. The Organic Law on Provincial Governments provided for power to be divided into national government, provincial government and concurrent powers. Through provincial governments, the people would be given the opportunity to actively participate in the process of government. And services would be delivered to the respective villages. The results were varied. Opponents of the system of provincial government saw it as consuming too many financial resources, resulting in basic services not reaching the people. Political insecurity caused to the members of the national parliament by the members of the provincial governments who were 'in touch' with the people fuelled moves to reform the system. This was eventually achieved in 1995 with the enactment of the Organic Law on Provincial Governments and Local-level Governments and the repeal of the original Organic Law on Provincial Governments.

Even though the new law is supposed to strengthen the system of provincial and local government, the new system effectively gives greater power to the central agencies. The control of finances, staff and legislative processes remains with the national government. In the name of 'national interest', the PNG Government can legislate on matters which should be the responsibility of the provincial governments and local-level governments.

Development strategies and their consequences

Papua New Guinea has gone through a lot of changes since contacts with European interests intensified in the latter half of the 1800s. The formation of a single thriving democracy out of numerous socioeconomic groupings provided the backdrop that has from the very beginning influenced the process of development. One of the legacies of the colonial enterprise was the administrative districts which became the country's provinces.

Resource development

The plantation economy became the major commercial interest that shaped the future of Papua New Guinea. Suitable land was identified and acquired. European settlements and the imposition of 'government' authority followed. The plantation economy gave rise to the alienation of valuable land, the engagement of a labour force, the establishment of administration, involvement of the people in a cash economy, the construction of roads, bridges, wharves and airstrips, and the spreading of new values. Copra, coffee, cocoa, tea and rubber became the main plantation crops.

Gold was also an attraction in certain parts of the country. The townships of Wau and Bulolo grew because of gold-mining activities. The Panguna, Ok Tedi, Porgera, Kobe, Lihir and Misima areas attracted huge investments and experienced transformation and accessibility to an extraordinary level of services only because of the discovery and extraction of the mineral, petroleum and gas resources there. Copper, silver, gold, oil, gas, nickel, timber and fish have become PNG's income-earning resources.

The development of the country's natural resources was accompanied by the provision of health and education services and the construction of communication infrastructures.

Parts of the country which were inaccessible or not suitable for commercial activities did not receive the same level of attention. Given the topography of the country, the aviation industry has been invaluable.

Urban-biased development

Development is often associated with the provision of services, such as health, education, roads, ships and telecommunications, and opportunities to engage in economic activities or employment in the modern sector.

As the rest of the country came effectively under colonial control, districts were created to enable ease in administration. District centres later became towns, and the towns became the administrative headquarters. Modern services associated with health, education, communication and business followed. Nearby communities received both the benefits and the negative effects of the towns. People from distant places moved into the towns to access the services as well as to take part in the modern sector. The role that the towns had in the development of their districts depended on what the districts had to offer. Thus,

Rabaul, Lae, Goroka and Mount Hagen were considered more desirable than Kerema and Kundiawa.

The provision of services is further challenged by the rugged and remote nature of the country, a situation as true today as it was during the period of colonial administration.

Politically biased development

The political process has, since independence, emerged predominant in determining resource allocations to provinces, so much so that elected representatives to the national parliament shove and push to be appointed onto the National Executive Council. Since the constitution allows for only a 28-member cabinet, the high demand contributes to instability as members of parliament manoeuvre to gain advantage.

Given the political landscape, not every province can be represented on the National Executive Council. Together with the system of political parties, the close association of resource allocation with political affiliation is influencing the development process. Given the diversity of the country, this could easily cause widespread problems.

Foreign aid-influenced development

Foreign aid in various forms and sizes has been part of PNG's development process. Australia has contributed to the national budget from the very beginning. Aid has also been received from the World Bank, International Monetary Fund, Asian Development Bank and European Community, and from individual countries. As PNG capacity to manage the aid has been demonstrated, the associated conditions have changed. Budget support has given way to project or programme aid. Various areas of need are identified and aid is targeted accordingly. Aid is also focused on specific provinces as a result of either identified need or politically correct decisions at a particular point in time. To date, education, health, women, children and economically attractive infrastructures have attracted a lot of foreign aid.

The need for greater autonomy

The political reality of Papua New Guinea is rooted in the colonial past. The nation was moulded out of many previously autonomous groups, some large, others small. Nothing can capture the character of this country better than the fact that it has 864 different languages.

PNG's diversity, combined with the colonial legacy, gives credence to the desire for greater autonomy. This was realised very early on when the embryonic national leadership embraced the decentralisation of powers. Spearheaded by Bougainville and East New Britain, provincial governments were eventually set up in all provinces. Experience has clearly demonstrated that Papua New Guinea cannot be effectively administered, managed and developed by a centralised system of government. The emergent sociopolitical culture has imposed new parameters that

must be recognised and managed. The provinces provide the basic functional units for the development of the country. Over the years, they have also become politically distinct from one another. People identify themselves with the provinces that they come from. The issue of equal participation takes provincial representation into account.

The current state of the nation is characterised by limited opportunities and the need for greater participation. Population growth, combined with inadequate educational opportunities, is raising illiteracy levels. For those who enter the formal education sector, lack of opportunities in high schools, technical colleges and tertiary institutions results in many young people returning to the community with some education and shattered dreams. For those who complete various levels of education, a lack of job opportunities means an increasing number of unemployed or underemployed. Basic services have yet to reach many parts of the country.

The provinces receive funds in the form of monthly grants. The national government's cash flow determines their release. To date, this process has been characterised by grants not being released on time and their level varying and often proving inadequate to fund programmes. Since July 1999, a major source of provincial internal revenue – retail sales tax – has been taken over by the national government, leaving many provinces totally reliant on it for the implementation of their programmes.

Provinces should be brought in as a strategy to increase opportunities for the people from every part of the country to participate in development. Provinces should be given greater autonomy to do what they can without being held back by the national government. Greater autonomy could increase opportunities and allow services to reach a greater number of communities throughout the country.

Greater autonomy for meaningful development

Autonomy means being responsible for as many functions as possible. The role of the national government should be one of support for the provinces, and be limited to national security, monetary and fiscal areas, and foreign affairs. Provinces should effectively govern, administer, legislate, generate revenue, determine and fund policies, and develop natural resources in their respective jurisdictions.

The provinces need to be empowered to function as autonomous units within the national framework without reference to the national government. The functions and powers that provinces exercise should not be subservient to any national law. Two basic laws currently set the parameters within which the PNG political system functions: the Constitution of the Independent State of Papua New Guinea; and the Organic Law on Provincial Governments and Local-level Governments.

Granting greater autonomy to the provinces would require changes to the constitution and the Organic Law. Individual provinces, or two or more provinces, if they so decided, should have their own constitutions; laws that provincial governments have powers over should not be altered or removed by the national government; provinces should raise their own revenue; and provinces should have power and control over investment in their territories, including development of natural resources. Such autonomy would affirm that political power originates from the people; people maintain complete control over the land, sea and resources; every part of the country would have equal opportunities to develop; and autonomous units of development would stand a better chance of meeting the challenges brought about by rapid changes.

The Organic Law should limit itself to the framework and generalities of the political, constitutional and administrative system.

Village-focused human development

Development simply means meeting the changing needs of a person or society. In predominantly village-based Papua New Guinea, with rapidly growing urban areas, the development process provides enormous challenges. Whether in village or town, people's needs change and must be met. The level of achievement and satisfaction determines the quality of development and establishes new needs.

Village-focused human development involves enabling the person in the village or community to determine what his/her needs are and to work alone or with others to meet those needs. The level of needs changes as additional information becomes available and experience widens and as the community becomes more exposed to the wider world through improved communication, education and mobility.

In 1990, the Manus Provincial Government officially adopted integral human development as the principle that would guide its development initiatives. In the strategy, the total needs of the Manus people take central stage in all development programmes. A province-wide survey resulted in the determination of 12 minimum needs that needed to be met in order to achieve integral human development: shelter, spiritual development, medical care, family life, peace and harmony, population and family planning, water, food, communication, money, education and land. Individuals, families, groups, churches and government institutions became partners in the development process. They were urged to translate what the needs meant to them and to decide on ways to meet the needs. Their own conditions and their capacities determine what they can do.

In order to empower the people, the provinces must be empowered as the political and administrative units. This would create greater opportunities for more people to effectively participate in the development process that directly affects their lives.

Civil society and development, non government organisations and churches

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Introduction

Papua New Guinea (PNG) has been blessed with an abundance of renewable and non-renewable natural resources. These include fast-flowing rivers capable of generating hydroelectric power, vast forests, rich marine life, agricultural potential, and significant deposits of minerals including oil and gas. It not only receives the most Australian development assistance but also benefits from a generous international aid programme. In 1996 foreign aid per person was estimated at US\$87, one of the highest levels of aid among the lower middle income economies (AusAID 1998:21). However, there is a growing realisation that very little real development is taking place. The recently released *Human development report* (UNDP 1999) ranks Papua New Guinea 129 out of 174 countries, with Fiji ranked 61st, Samoa 70th, Vanuatu 116th and Solomon Islands 118th. This year's report measures life expectancy, access to education and purchasing power of income. While it is valid to argue that measuring purchasing power may not be appropriate in a country where the majority of people (85 per cent) can meet most of their basic needs (shelter, food and water) without a cash income, the point is that Papua New Guinea has not done well in successive reports, compared with its Pacific neighbours, whatever is being measured. The most comprehensive economic surveys commissioned by AusAID (1997, 1998) rank the country last in terms of social indicators, compared with other Pacific nations. PNG's health accomplishments were considerable in the 1970s, but these have not been sustained in recent years.

Constraints on development

There are a number of factors that continue to hamper development in Papua New Guinea. Perhaps the most important is the very high rate of population increase. The estimated population is 4.5 million, with an average annual growth rate of 2.3 per cent. Though family planning is pursued by the Department of Health, it has not been a priority issue with any government since independence in 1975. In any case, most of the health centres with family planning programmes are church-run and therefore carry out programmes acceptable to their religious beliefs. Most Papua New Guinean cultures insist on a man's right to have children; in some areas, a mother is rewarded for every child she produces because of the high value placed on children. Besides the Department of Health and, to a lesser extent, the Department of Home Affairs, ad hoc family planning

activities are carried out by some women NGOs. A Population Policy was adopted in 1991; a new policy was announced in October 1999. Both documents appear to be for planning purposes, while population control does not appear to be a national concern.

The second major constraint has to do with the delivery processes of development. The main mechanism is through the bureaucracies of either the national or the provincial governments. PNG's bureaucracy is not only large and unresponsive, but also extremely unproductive. In the last two or three budget cycles, because of the poor performance of the economy, the respective governments have only appropriated sufficient funds to pay salaries, with no financial resources to deliver services or carry out programmes. Meanwhile, the government expects the bureaucracy to carry out a futile exercise of rationalisation, reform and restructure with a view to reducing the size of the public service. It is futile because, as well as all its other problems, the public service is saddled with political cronyism and entrenched *wantok* (nepotism) networks.

The problem of development is not so much in the area of policy making as at the implementation level. There are many good policies, some well conceived, others coming through numerous speeches made by ministers both in parliament and outside. A few policy documents even include a gender component. Extracting ideas from policy documents, turning them into plans and thinking through the implementation process take too long. This includes budgeting sufficient funds for implementation. Whether our bureaucrats are ill-trained, out of touch or lacking in initiative, it is affecting the government's ability to deliver services to the rural areas, where the bulk of the population is located. Many of these policy documents include donor-driven projects and programmes. Former Prime Minister Sir Julius Chan came up with a solution he called 'fast-tracking projects'. But this can only be successful with experienced politicians who know how the unwieldy PNG bureaucracy works.

Too many of the problems associated with a lack of real development are political and bureaucratic. The constant 'changing of the guard' at both these levels brings about instability, uncertainty, frustration and even bewilderment. Frequent changes in government officers in vital policy areas affect the delivery of services to the rural majority. Apart from the constant reshuffling in the political arena, newly appointed ministers' subsequent rearranging of key staff within their ministries and the boards they control adds to this continuing

frustration, frustration of public servants and the delivery of projects. The over-politicisation of the public service has paralysed the bureaucracy.

Power to the provinces

In 1995 the Wingti/Chan Government passed the new Organic Law on Provincial and Local-level Governments, changing the whole structure of government in order to address these very problems. The new Organic Law has set up a political system which reaches right into the communities. It is meant to bring about even greater participation by local communities in deciding what kind of development they wish to see in their own areas, through their ward committees. In 1998 and 1999, because of the poor state of the economy, funds which are supposed to go to provincial governments, as stipulated by the Act, were not budgeted for, simply because there was no money. The government commitment to the new system can be seen in its allocation of funds to the Department of Provincial and Local Government Affairs, the department which is tasked to implement the reforms. In 1994, it received K58 million in its annual appropriation; in 1995 this was reduced to K31 million; and in 1996 it was savagely cut to K3 million.

So the new system of service delivery is gradually being implemented. Because, in many provinces, the physical infrastructure does not exist, it will take up to ten years to put the new system in place, including training staff, particularly at the local level. There has been a devolution of power, but it comes with responsibility as greater financial resources have also been shifted to ward, district and local-level governments. While all this is happening, PNG's social indicators continue to decline as the population continues to grow.

Non government assistance in development

Bringing development to Papua New Guinea is not the concern of the PNG Government alone. There is an enormous amount of goodwill expressed by various donor agencies, depending on their self-interest, which have a desire to assist in this enormous task. There is no doubt that financial and appropriate technical assistance is greatly needed. But, again, the delivery processes are preventing much of this donor assistance from reaching its targets. Finance ministers in the last two years have highlighted the problem of draw-down in their budget speeches to parliament. The government's inability to utilise available concessionary funding means a loss of development opportunities. In its June 1999 *Quarterly Economic Bulletin*, the Bank of Papua New Guinea reports that the government managed to draw down only K18.3 million from overseas concessionary sources in the first six months, representing a meagre 11.4 per cent of the total budgeted for 1999.

What is being done is extensive work by churches and NGOs in their various capacities. What is needed is for the government to acknowledge and use this alternative route to providing services and so effect development. Churches have been engaged in development work for too long with limited financial resources. Many church hospitals and health centres have closed due to lack of money. It should not be forgotten that, in Papua New Guinea, it was the churches who in the 1880s introduced education, provided health services, taught new skills and crafts, and brought new goods into communities, roles and activities which are now organised into a variety of government, and aid and development, agencies. For instance, in the provinces of West and East Sepik, 95 per cent of education and health services are provided by the Catholic Church. The majority of PNG's Seventh Day Adventists (SDAs) receive all their primary, secondary and tertiary education from SDA-run institutions. There are well-established NGOs in the areas of environment, women, literacy, economic empowerment, legal rights and youth. Many have built up expertise and experience in developing and implementing projects, some of which are more successful than government-run projects.

What is needed is for donors to be able to channel financial resources to the churches and NGOs. Because most of the latter's human resources are dedicated volunteers, funds would be spent on implementation. In provinces where the churches and NGOs have maintained a long-established presence, it would be more economical for donor assistance to be channelled through them rather than a new government structure being set up for the same purpose, often leading to competing interests. But there have been cases of NGOs which spring to life because of promised financial resources, and PNG Watch is a recent example. PNG Watch was established in 1994-95 soon after Papua New Guinea was forced to adopt the International Monetary Fund Structural Adjustment Policy (SAP). There was a lot of criticism of the policy coming from Port Moresby-based NGO personnel. The World Bank set up an NGO-funding facility for NGO development projects. PNG Watch was established to oversee the channelling of funds to NGOs. PNG Watch was involved in dubious attempts to unseat a legitimate government during the Sandline crisis and campaigns leading up to the 1997 national elections. It has since become defunct.

It is not a good idea to create new NGOs just to channel funds. The skills of international NGOs could be sourced to strengthen existing NGOs and this would mean that services were being delivered while local capacity was being built up.

Churches and NGOs are by their nature more successful in involving civil society. The churches possess the largest networks in the country, reaching right down to the parish or the village. Significantly, Christianity has been embraced and internalised as Papua New Guinean, part of PNG culture, not a foreign and imported ideology. The only NGO which comes close in this respect is the Papua New Guinea National Council of Women. Because of their extensive networks, they have the potential to bring about greater accessibility to services in rural Papua New Guinea.

The government has slowly begun to recognise the church, placing church workers on government salaries only in 1997. An NGO unit was created in the Department of Home Affairs in 1993 and a policy framework was approved in 1995, but nothing has happened since. It suffers the same fate as other units placed in the marginalised department, such as Women, Youth and Religion. The department has undergone so much reorganising and restructuring in the last ten years that its original mission has been affected. The continual neglect of this vital social department is an indication of the degree of credence given by government to the work of churches and NGOs. For that matter, successive governments have never made clear their views on religious institutions in terms of policy and funding. A set of criteria has to be devised to identify those NGOs and churches that are able to deliver services and to assess their effectiveness in doing so. There are areas in which they are able to provide more effectively than government agencies.

In the last two years, the government has tried to involve civil society by including representatives of the business sector, women, churches and NGOs on its Consultative Implementation and Monitoring Council, chaired by Sir Mekere Morauta, now Prime Minister. It was formed after the first Economic Summit held in 1998; a second National Development Summit was held in August 1999. The council's main function is to gather, organise and channel the input of these groups into the process of budget formulation. The multisectoral National AIDS Council is another government-funded agency which has included the voices of women, churches and NGOs in its fight against the HIV/AIDS epidemic. As multisectoral provincial AIDS councils are established, this spirit of partnership will be continued throughout the country.

A number of donors already work with women and environment NGOs throughout the country. For instance, the United Nations Development Programme (UNDP), the United Nations Fund for Women (UNIFEM), the United Nations Population Fund (UNFPA), the Asian Development Bank, and New Zealand Overseas Development Assistance (NZODA) are already funding projects being carried out by the National Council of Women and by Papua New Guinea Women in Politics on gender awareness, family planning, reproductive

health and good governance. AusAID is in the first phase of its Community Development Service project aimed at capacity building for women NGOs. However, there are well-established churchwomen's organisations, especially those associated with the major PNG churches, which are not benefiting as much as they should from donor agencies. Almost all pentecostal and evangelical churches have also formed women's groups, but they tend to be more traditional and more spiritually oriented than those in the mainstream churches. As they become affiliated with the National Council of Women, they are gradually losing their traditional outlook.

Conclusion

Before donor assistance can be channelled to NGOs and churches, the PNG Government has to acknowledge the efforts being made by civil groups and has to give real thought to how to involve them more fully in the country's development. A mechanism is needed to expand and formalise what some donor agencies have long recognised. Those agencies that are interested in bringing about real development have been innovative in creating partnerships with NGOs. But not all failed development opportunities have been the fault of government. There have been many instances – the World Bank-funded women's credit scheme is one example – where assistance has literally been thrown away, with donors displaying little interest in how it is being utilised.

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The struggles of women and girls in Simbu Province

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Introduction

This article discusses two kinds of violence: violence against women and violence against children. A lot of the violence inflicted has a direct relation to childbirth, abuse of the rights of women and children, and the fact that women and female children are the silent suffering minorities in the Highlands of Papua New Guinea.

Women's rights have been widely researched and written about as an illustration of the tension between human rights and customary law in Papua New Guinea (PNG). The Law Reform Commission has also done important work in this respect, including proposing legislative reforms. The Papua New Guinea Government has a well-developed legal system and the national constitution guarantees men and women equal treatment before the law. The government has also committed itself to United Nations (UN) conventions and declarations affirming women's right to fair treatment in family law and in cases of violence against them. The Convention on the Elimination of Discrimination against Women was agreed to by the national parliament in June 1994 and commits the government to eliminating all discriminatory laws and customs. At the same time, there is no recognised authority in Papua New Guinea to monitor the situation of children and implement the Convention on the Rights of the Child (CROC), even though the government signed and ratified the CROC in 1993.

This article focuses on the everyday situation of women and children in Simbu Province, the attempts being made to address the problems identified, and the practical difficulties of running programmes of change.

Development problems and opportunities

Simbu Province is positioned in the middle range of Papua New Guinea's provinces in the ranking of most indicators of health, nutrition, education and income. However, in many other ways, it is among the least developed. Simbu is highly populated, with little arable land, no large scale commercial agriculture and a very limited urban sector. There are very few employment opportunities and, as a result, emigration is increasing. There is also considerable dissatisfaction and unrest.

Women experience a range of social and economic problems related to their subordinate position in Simbu society. Issues of major concern to them relate to the difficulties they face as unmarried mothers, as victims of domestic and all other forms of violence, and as a result of their inadequate control over resources for income generation. Women have less access to and

control over cash income than men, and whatever income they do receive is generally used to satisfy the needs of the whole family.

Women have benefited much less than men from those government services that do reach rural areas, with the exception of maternal and child health services. Women, however, are very interested in receiving training, particularly in literacy, agriculture, marketing and the management of microenterprises (North Simbu Rural Development Project 1993).

Violence against women and children

PNG traditions still dictate much of people's daily lives. The Highlands region is widely acknowledged as a strongly male-dominated society within which women and children are a silent and subordinate group. The violence being committed by men against women and children includes wife beating, brothers beating sisters, managers hitting subordinate female staff, child sexual abuse, rape and sexual assault, sexual harassment, and discrimination against women and girls.

Violence within the family is often dismissed by 'society' as a 'family problem'. Inter-tribal fighting entails rape and property damage, but men treat it as a game and more and more young men are participating. Women are also the target of 'witch hunts', being regularly accused of sorcery whenever a person falls ill or dies. The practice of polygamy is still rife in Simbu, perhaps more so now than in the past owing to the impact of socioeconomic change.

The situation described above is similar in most other parts of the Highlands. Women are born into a difficult and demanding society. They learn to work, produce and manage in an extremely tough physical and stressful social environment. The situation of women and children has become even worse in the face of the latest drought attributed to the El Niño effect. At the same time, while women are victims, they are also survivors.

The distortion of custom

There can be little doubt that women in PNG society today are viewed and treated differently from their female ancestors. However, it is hard to unravel genuine tradition from myth. Cultural notions have been greatly distorted to justify or defer consideration of a wide range of issues relating to gender violence and abuse. Family living arrangements have changed from extended to nuclear. There has been a shift from rural patterns of subsistence agriculture to urban-oriented cash economies.¹

Sexual practices are changing rapidly. Brideprice, a custom in the Highlands and some coastal provinces involving the exchange

of traditional wealth, has now become a cash transaction. Cash received is quickly dispersed and spent among the bride's relatives, leaving her no recourse in the face of violence within her marriage because she cannot repay the brideprice if she leaves. Wife beating and other forms of abuse are linked to women's high morbidity and mortality rates and to the death or disabling of unborn children. Very few of these cases are ever reported to the police.

Polygamy is now considered by many men as a right attached to their own personal power, status or wealth. Modern-day polygamy is dysfunctional and violent. Where it is commonplace, there is an increase in the number of violent assaults between co-wives, causing serious injury or even death. Because of polygamy, there are now significant numbers of women in prison. The psychological stress it causes needs to be further researched.

Village courts and customary law

Customary law remains strong in the Highlands of Papua New Guinea (Doherty and Garap 1995), although customs are changing with development. Village courts were created to mediate local disputes using customary law but, in practice, they usually serve only the interests of men. The powers of the courts are determined by the national parliament. The appointment of village court magistrates is decided by provincial governments (which contain no women except appointed representatives who have no voting rights). Despite the constitution's guarantee of equal rights, these courts do not treat women, young people and less educated members of the community as fairly as they do better educated males.

The primary function of the village court is to ensure peace and harmony in their area. They have civil power to deal with people who are claiming compensation, and matters such as the custody of children, brideprice and compensation for death unless the death occurred in a road accident. They have the power to punish certain crimes which are listed in the Village Court Act. The penalties permitted include a monetary fine or a community work order. If the offender fails to pay the penalty without a good excuse, he/she can be put in jail for one week for every K10 outstanding. While that is intended as a maximum penalty, in practice village courts often impose it as a matter of course. They rarely consider reasonable excuses for inability to pay a fine. In a significant number of cases, prison sentences for women are imposed improperly by these courts.

Village courts discriminate against women and children in numerous ways:

- Court proceedings are intimidating, and women feel they cannot speak freely.
- Most of the magistrates are men, trained poorly or not at all, and sometimes not even properly appointed.
- A woman's word is often not accepted.
- The courts often do not give people, particularly women, the right to speak, nor do they always listen to both sides as they are supposed to.

- People in rural areas are not always given enough notice to attend court to enable them to travel there in time.
- Male offenders are not punished. Sexual assaults are often referred to the village courts where they are resolved by compensation payments. Even when rape cases do go to the police, the accused are frequently granted bail.
- Women are often blamed for rape or marital problems because of traditional patterns of thought.
- The courts often enforce traditional attitudes and values which are oppressive for women and young people.
- Women bear the burden of communal compensation payments. Compensation for rape is usually paid to the male relatives of the victim, not to the raped woman. Female relatives of the male offender often have to make the payment in cash, pigs or garden produce. These women become angry at the victim.
- There is a lack of district courts in Simbu Province to use as an alternative to the village courts. Most people do not want to spend money getting to the provincial headquarters, so they allow village courts to settle their disputes, however unsatisfactorily.

The village courts are not the only authorities failing to protect women and children. Police brutality and lack of sensitivity also contribute to the suffering. Women inmates in jails have been assaulted and raped by police on duty.

After meeting with women in Simbu in 1993, national court judge Mr Justice Brown reported that they claimed to be systematically discriminated against. The complaints brought to his notice related to the use of village courts to resolve disputes 'traditionally', in a way that breached constitutional guarantees of equality and the national goal recognising the family as the basic social unit in a Christian society. As the number of polygamous marriages increases and spreads from traditional 'big-men' to other men (possibly as a result of salaried employment), women have found that their customary responsibility as subsistence farmers has been adversely affected by village court decisions which, they have said, take no account of the part men play in generating disputes.

It is clear that there are serious problems in the Highlands with respect to family law (Zorn 1994-95).² Men still treat women as property and, when women wish to exercise their equal rights as guaranteed under the constitution, men create trouble. The national court is waging a lone battle to try to give effect to the provisions of the constitution. The pervasive denigration of women may appear to the judges to be beyond the reach of merely legal solutions, but the behaviour of the village courts towards women could still be changed. After all, in the hierarchy of the PNG legal system, the village courts are directly answerable to the district courts, and ultimately to the national and supreme courts.

Efforts by women to combat violence

By 1983, women in Papua New Guinea were protesting against violence, including the increase in domestic violence. They were demanding law reform. National surveys revealed the extremely high incidence and severity of wife beating. A 1994 UNICEF report showed that Papua New Guinea had the world's second highest incidence of domestic violence (*Pacific Islands Monthly* 1995). The incidence of rape increased from 285 reported cases in 1980 to 1896 in 1990 (*Sydney Morning Herald* 1998).³ However, more than a decade of campaigning has brought little real improvement in a society where modernisation is accompanied by a rapid downward spiral in the status, safety and power of women. Ironically, this is happening at the very time when there are political and public calls for women's increased participation in all forms of social, economic and political life.

A local NGO, the Women and Law Committee, which was established in association with the work of the Law Reform Commission, implemented a massive popular media and education campaign aimed at raising awareness and changing attitudes and behaviour. It ran for six years and achieved an impressive increase in awareness that wife beating is wrong, and that women have the right to be free from violence. It spread the message that there are laws in place to protect women and that women, communities and the police should do more to enforce the laws relating to domestic violence.

In recent years, however, reforms have stalled and the campaign has lost its momentum. The problem of gender violence has become more complex and urgent. Women's organisations wishing to take more direct local action have begun to establish crisis centres, guided by the successful Fiji Women's Crisis Centre. However, without the latter's strong feminist underpinnings and in a society with much more open hostility towards women, the establishment of viable and effective crisis centres in Papua New Guinea is an extremely slow process.

Crisis centre staff and support communities have found themselves increasingly locked in battle with intransigent and negligent police, not to mention the male public. Some workers feel extremely threatened personally and insecure in their attempts to advocate and act to protect women's rights. Other women are quick to deflect these initiatives and defend 'men's rights'. Making a breakthrough is very difficult.

The Simbu Women's Crisis Centre was set up in 1995. Funded by Save the Children Fund (New Zealand), the centre mainly concentrates on awareness raising/advocacy of women's and children's human and legal rights, and on counselling and educational programmes. The long-term plan is to assist the district women's councils to set up similar establishments in the other districts within the province. With only one staff worker to run it, the centre tries to work with a network of people and organisations and has a fair number of representatives (for example, police, churches, educational institutions) on the

Committee against Violence against Women and Children. The centre also has a part-time male counsellor who comes in twice a week to provide a service to men who seek counselling.

Two men who work closely with the centre are the deputy administrator for the province and the assistant provincial police commander. The administrator brings women's issues to the forefront at senior management meetings and makes sure that the provincial women's officer attends all such meetings. The police commander provides opportunities for the centre to talk at police meetings and workshops. Centre staff are encouraged by this support in the struggle to address the problem of violence against women and children.

Some strategies for change

The women's movement is still weak in Papua New Guinea, especially when it comes to the task of using the UN Convention on the Elimination of Discrimination against Women, the Platform for Action, and the Global Women's Rights campaigns to change legislation, policy and practice. The establishment of the crisis centres is a start but they are still faced with too much community and police resistance and opposition. There is a danger that the women involved in these initiatives will become overwhelmed by the number and severity of problems.

Two years' active campaigning by 'Wearing Black on Thursdays' (an international campaign initiated by the World Council of Churches as a silent protest against violence against women and children) has been a regular reminder to the provincial administration and to the public of all forms of violence. The protest is inclusive; men who are victims of domestic violence or who are against any forms of violence are also encouraged to wear black on Thursdays.

A further opportunity is presented by the recent creation of local-level governments. The centre is now putting together some ideas on the kind of local government laws that could address violence against women and children. These ideas will be given to the provincial government lawyer who will draft legislative provisions for consideration by the provincial assembly. If such proposals become by-laws, they will then be subject to enforcement in the village courts.

The role of crisis centres and other relevant organisations is to speak out and educate Papua New Guinean men and women on women's and children's rights in small communities by counselling, by monitoring violence and by officially reporting alleged cases of abuse. We aim to deter male offenders and to empower women to work together to improve their status and that of their children.

After the evaluation of the work of the centre, a child rights desk will be set up to address child abuse cases. Whoever coordinates this programme will have to be strong in character to be able to deal with the manmade tradition that continues to suppress women and children.

Acknowledgement

This is a shortened version of chapter 10 in Sinclair Dinnen and Alison Ley (eds) forthcoming, *Reflections on violence in Melanesia*, Federation Press and Asia Pacific Press, Canberra.

Notes

1. I thank Elizabeth Cox of the Save the Children Fund, Wewak, Papua New Guinea, for the use of her draft article, 'Gender violence and women's health in PNG, 1997', in this section.
2. Jean Zorn (Professor of Law, who taught at the Pacific Law Unit of the University of the South Pacific and, in the 1970s, at the University of Papua New Guinea) came to this conclusion when she wrote about the case of a Highlands woman who was sent to prison for adultery by the village court, and whose case was reviewed by the national court (unreported National Court Judgment N959 1991).

3. The article notes a particularly high incidence in the Highlands, where pack-rape is connected to tribal fighting. The article is based on an AusAID consultation by Anou Borrey.

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No development without peace: Rethinking development in Papua New Guinea: A conceptual framework

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Introduction

In this paper I will present an alternative explanation to the current economic problems in Papua New Guinea (PNG). My analysis of the country's economic havoc may appear too radical for sympathisers of economic growth. Nevertheless, if citizens are going to suffer the bitter economic pill, they have the right to be given a balanced view. The choice the nation makes in recovering its troubled economy will depend on opening the discussion beyond the narrow economic theory.

Defining peace and development

I equate the concept of peace in the Third World not with the absence of war as defined in the West, but as justice, equitable distribution of resources, development by the people, appropriate education, human rights and basic human needs. Absence of these fundamental pillars of development in PNG has exacerbated violence perpetuated by a structure that breeds underdevelopment and poverty (Galtung 1990, Swan 1995). Although underdevelopment and poverty are used interchangeably, I propose definitions of the two concepts for clarity. Underdevelopment is the result of emulating a foreign development model that may look impressive, but is often poorly administered and has a short life span. Poverty refers to a quality of life, usually due to inappropriate development decisions, whereby wealth fails to trickle down to the poor. Instead of addressing the root causes of poverty and underdevelopment, a large proportion of foreign aid continues to be diverted to treating the systems of underdevelopment. It would be meaningless to talk about development without peace or peace without development, because the two concepts are intricately linked (Toh 1986, Reid 1993, Kaman 1998, Jenkins 1999). Improving the Police Force and the PNG Defence Force to deal with law and order only addresses the symptoms of underdevelopment. When politicians fail to adhere to the laws enshrined in the constitution of PNG, the public is more likely to disrespect the law and ultimately the state.

PNG, a society where wealth was traditionally shared and people were valued and respected, is becoming a society that promotes greed and competition and places less value on the people and their diverse cultures. I feel this is one of the major causes of violence in PNG.

Modern development theory

Traditional economists assert that economic hardship in PNG (devaluation and high inflation) is a 'normal' process. The assumption is that the economy will eventually pick up if PNG adopts the structural adjustment package (SAP) introduced by the World Bank. When SAP was first introduced, individuals and groups throughout the country reacted against its austerity measures while others pointed out that the model failed to undergo careful scrutiny in the country before it was implemented. Only when the debt service obligations can be substantially met does the International Monetary Fund (IMF) consider the debtor country free to pursue other objectives (George 1995:223-41). SAP in PNG is only going to exacerbate structural violence and contribute on an unprecedented scale to lawlessness and lack of peace throughout the country. The majority of people in this country have the right to be told the truth about what is really going on in the economy.

Debt transparency

Papua New Guineans have the right to know exactly how much kina their country owes to donor countries before the government enters into deals for more foreign aid. It should be made clear to the citizens that the present increases in prices of goods, coupled with excessive exploitation of the country's resources, are not for 'development' per se, but to divert all these nations' resources within a confined structure to repaying the country's debts. It is important to citizens that the PNG Government and responsible departments such as Treasury verify how many million or trillion kina PNG is in debt and how long it will take to complete paying back this loan. It is ironic that the government is seeking more foreign aid when attempts have not been made to find ways of repaying outstanding loans.

Trapped in debt

Debt means the country has a large amount of loan owing to foreign governments and their agents, namely the IMF/World Bank. Foreign aid or loans are not free money. This money, like any loan, has to be repaid with interest. The main reason for the debt trap is because PNG, like all Third World countries, is incorporated into the world market system by the world market.

system's colonial power as a primary producer of agricultural products. This market system has hardly advantaged Third World countries (Blomstrom and Hettne 1984, Wilber and Jameson 1992). The reasons are as follows:

- Some of the primary products have synthetic substitutes. For example, rubber producing countries have not done very well on the world market since the 1970s. Moreover, an increase in prices of imported goods, particularly industrial goods, means additional costs for most Third World countries under the pretext of free trade and comparative advantage.
- The phenomenon of 'comparative advantage' and 'free trade' disadvantages the Third World. World market prices are determined by the industrialised countries, with no significant input from the Third World. Often the prices of goods are manipulated by the Western countries, which hardly promotes the notion of 'comparative advantage' when market forces are tied to the politics of trade. For example, when PNG is told that gold prices are low, the industrialised countries manipulate the prices by lowering the price of gold so that they are able to buy gold and keep it in reserve. When we hear that the price of gold has risen, these countries are able to sell their gold to make a huge profit. The practice enhances their economic stability while the Third World undergoes frequent price fluctuations of their primary products and even of their natural products. Third World countries find it difficult to earn their foreign currency when their economy is agriculture-based, coupled with the fact that they are weak players in the global market and political scene (ABC 1977, George 1985).
- Corruption at the political level in PNG has serious consequences for the process of economic development. Call it corruption, kleptomania or graft, these developments are clear indications of poor performance of the orthodox development model that puts growth before people. The underlying assumption is that accumulated wealth will trickle down to the masses. In PNG, the generated profit accrues to a few politicians and big businesses, and a staggering amount of kina is repatriated to foreign institutions such as the World Bank and the IMF.

The value of the kina has plummeted, and at the time of writing is about US\$0.345 or A\$0.467. The argument for increasing foreign investments is that it will boost the value of the kina. Moreover, the devaluation of the kina is further justified as a necessary short-term sacrifice because in the long run the economy is likely to pick up. In the primary sector, emphasis is on cash crop production, logging and natural resource exploitation

(copper, gold and oil). The introduction of SAP perpetuates the domination of the Third World economy into capitalism, which will cause severe social and economic havoc in PNG.

How PNG governments address development problems

Successive governments over the years have developed a tendency to blame one another for the country's lack of 'development'. Meanwhile, the country is still awaiting the impact of modern development. The real needs of Papua New Guineans centre on developing citizens to secure a humane, peaceful and sustainable environment (Jenkins 1999, Naihuwo 1999). Human development means actively involving Papua New Guineans in development to improve their livelihoods in the urban and rural areas. The same principle should be incorporated into various sectors and levels of both private and government organisations.

Papua New Guineans would like to see good governance and leadership take the country in the right direction. Politicians and decision makers should ask what future we are building for our children. Successive governments appear to be more interested in what they can get out of the system by means of corrupt practices than in upholding their political integrity and being accountable and transparent in their actions. Papua New Guineans need not be complacent anymore. The middle class and the grassroots should exercise their democratic rights and counteract threats used by the government and foreign agents.

How PNG can repay its foreign debt

The following outlines what the PNG present and future governments should be doing to solve the root causes of PNG's troubled economy. The first task of the government in power should be to adopt long-term economic measures for strengthening the processes of sustainable development. This is critical if the country is to avoid falling into the trap of adopting inappropriate short-term ad hoc economic reform measures.

Short-term measures

- When people know how much the country owes in debt, strategies should immediately be set up to cut costs where necessary to recover some of the money. A coordinating body should be set up in every government organisation and institution to critically examine their operations. Ongoing research into such development issues would be an advantage on a national level. This is already happening but needs to be properly coordinated.
- Politicians and national elites should consider selling some of their wealth as a contribution to paying off the country's debt. Ordinary citizens should also be asked to contribute.

Long-term measures

- Politicians, bureaucrats and technocrats should be firm and transparent in their actions rather than passively accepting the advice of foreign banks and consultants on development matters. For instance, foreign aid is not free money. Aid is usually given in the form of tied aid, meaning that the donor countries determine how aid is to be used. These conditions need to be carefully scrutinised by the government before accepting the aid package.
- The government should consider reviving and supporting the Ombudsman Commission and its functions with the primary goal of monitoring the behaviour of politicians, and tightening up the loopholes in politics that breed corruption, nepotism and mismanagement.
- Economists maintain the view that there are 'limited' resources in the world to feed everyone. This view deserves to be contested given the fact that the North and internal elites consume the bulk of resources to sustain their affluent lifestyles at the expense of the majority (Trainer 1985). For instance, PNG has a large pool of resources, although 20 per cent of accumulated wealth is being consumed by the internal elites, mainly politicians and their cohorts. On a global scale, the USA spends billions of dollars on building one nuclear weapon. This money could be redirected into paying off PNG's debts and investing in constructing water wells, clean latrines, aid-posts, and schools and equipping hospitals and health centres with common pharmaceuticals.
- The PNG Government, supported by ordinary citizens, should consider making a direct plea on humanitarian grounds to governments of the industrialised countries and their agents to write off PNG's debts.

Development with peace: An alternative development model for PNG

I urge political leaders, decision makers, planners, prominent elites and grassroots people to be serious about finding a development model that suits the PNG context. Perhaps the true meaning of development will derive from the grassroots and the ordinary citizens (Carmen 1996). I am also mindful of the fact that it is not an easy task to change a political, economic and social structure and mind set that is deeply entrenched. However, if no concerted effort is taken now to address the problem, it may be too late to reverse the process, leaving Papua New Guineans as the biggest losers of modern development.

Moreover, the government should review the five development goals adopted by the PNG Government at independence, from which the Eight Point Development Plan originated. When the

Eight Point Plan was formulated, the present economic problems were predicted as early as the 1970s. In reviving the eight point plan, the concept should be broadened to encompass capacity building, appropriate education with less emphasis on the 'diploma disease', peace education, indigenous knowledge, moral and ethical development, sustainable environment practices and people empowerment. The proposed themes are processes of development strategy to eradicate law and order problems and the growing signs of poverty in the country.

True development can only happen when Papua New Guineans join hands in solidarity to rebuild their country at their own pace and in a way that is suited to their own cultural context.

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The hegemony and enigma of modern development

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Introduction

Modern development, predicated on Eurocentric ideas and rational economic principles, has adversely altered and subjugated our social, political, economic, educational and cultural realities. It has given us a relentless desire to exploit our resources and plunder our ecosystems in order to fulfill its promises. This is fast eroding our cultural ways of sustainable living, our humanity, and our relationship with the environment. This article will discuss the hegemony and enigma of modern development and its impact on Papua New Guineans, especially its social, ecological, environmental and cultural costs. We have accepted development as a national goal and accept these costs as inherent in the process, without seriously considering the threat to our survival and that of future generations. This is the predicament now facing Papua New Guinea (PNG).

The hegemony of modern development

The modern development discourse influences the way we perceive and make sense of development, and define and shape how we relate to each other and to others nationally and internationally, as well as to nature and the environment in which we live. It influences the way we now produce, exchange and consume goods and services. It promises virtually limitless opportunities for pursuing the good life, an unprecedented increase in the wealth of individuals and society, and the freedom of personal agency in both economic and social spheres. It also promises a state of development and an advanced level of living similar to that in the Western world if we strictly adhere to its capitalist economic system and the inherent ideology of a free market: an exchange or market system manifested by the relationship between yin (supply) and yang (demand), individual agency, competition, colonisation and exploitation of the environment, the replacement of local and subsistence economies with modern large scale economies, genetic engineering, and corporatisation.

This capitalist system assumes that the desire to better our own condition through the provision and procurement of goods and services is a natural process. An autonomous and competitive individual is a fundamental part of this process. A person should be free to better his or her condition through the provision of goods and services, the creation of personal wealth, and the accumulation and consumption of goods and services without unnecessary government control and interference. Further, it assumes that such activities will improve the quality of life of

both the producers and the consumers. It also assumes that market mechanisms such as a system of pricing, free reign of competition, and the interplay between supply and demand will enable an unprecedented array of goods and services to be voluntarily exchanged and procured, thus serving the interests of both producers and consumers and thereby helping to sustain the capitalist social order. In essence, the capitalist free market assumes that economic rationality, based on supply and demand, should ultimately determine what and how much we produce and exchange, what and how much we obtain and consume, the nature of our relationships with others, the development of our places, how we utilise our resources and exploit our environments, and how we survive and live in the modern world.

The survival of people, societies, cultures, places, epistemologies and worldviews is contingent upon this key assumption. Those who cannot or do not play by the rules will perish in the process. Those who survive will be those who are able to manipulate and dominate other people and cultures, colonise their landscapes and mindscapes, manipulate the free market to serve their interests, and universalise and legitimatise their social, economic, political and cultural realities. They will mass produce, procure and consume goods and services and live lavishly by capitalising on the tribulations of those who are caught in the trap of modern development. This is the process that the Western world and the guardians of modern development have constructed and convinced so many in the world to follow. It is a process deeply embedded in social Darwinism by which the powerful survive and the poor, the powerless, the vulnerable, the weak and the destitute perish. This is the reality of modern development, a reality that is never discussed when plans and policies are articulated.

We in Papua New Guinea were unconsciously socialised into the modern development discourse by our Western colonisers and have participated in it as loyal and faithful servants ever since. The epistemologies, practices, ontologies and philosophies embedded in it are, however, profoundly alien to Papua New Guinean perspectives and realities. Yet we still accepted and embraced it as a legitimate and the only way of bringing more whiteman's goods and services to the people. We were convinced by our colonisers and still believe today that our worldviews and ways of living were 'backward', 'primitive', 'unconventional' and 'underdeveloped'. We were persuaded that our local economies, predicated on subsistence farming, a stable harmony with the natural world, appropriate technology, sustainable community living, coexistence and love of the

environment and its other inhabitants, respect for ecosystems and the sustainable use of resources, were subnormal and uncivilised. We were assured that modern development would improve our condition and propel us towards living like the whiteman. We must take on his passion for development and progress, as well as his behaviours and values, and suppress our own culture. We must assimilate, be faithful and immerse ourselves in his social, political and economic realities.

The ascendancy of the modern development ideology and the stigmatisation of Papua New Guinean realities have been powerful in persuading Papua New Guineans into unconsciously accepting and participating in development practices. Papua New Guinean resources have been milked for the benefit of the Western world, and Papua New Guineans have become locked into behaviour patterns that promise short-term gains but that have long-term social, political, economic and cultural costs.

Modern development was embraced by our political leaders at the time of independence in 1975, without questioning and adequately understanding its discursive practices, its inherent assumptions, or the nature of the reality it advocates and portrays. It was embraced without a critical exploration of other legitimate possibilities, including Papua New Guinean perspectives of development and sustainability. Since then, it has become the central mission of our country and has been imprinted in the development policies of successive governments. It defines our destiny and lays out the pathway for achieving it. And it convinces us that this destiny is real, and that our arrival there depends on our loyal participation, strict employment of its discursive practices, and playing within the defined parameters. It also provides the rationale for the continued domination and suppression of Papua New Guineans and their cultures.

The enigma of modern development

The faith we have that development will provide us with more goods and services and limitless opportunities for pursuing the good life has seen an unprecedented exploitation of resources, increased pollution, destruction of communities and local economies, breakdown in social order, concentration of wealth in the hands of just a few, and corruption. These are the consequences and long-term costs of modern development, continually ignored by governments and bureaucrats and rarely taken into account when economic decisions are made. They continue to be perceived and validated as the price we must pay. The government has apparently been too busy persuading its citizens of the need for development, selling the country's resources to overseas corporations and being manipulated by international financial institutions to concern itself with the long-term effects of its development policies. The naive argument that these impacts are natural and that government cannot do anything about them threatens the survival of Papua New Guinean cultures. It shows a total lack of critical consciousness and in-depth understanding of what modern development entails and is at the heart of Papua New Guinea's social, political and economic problems.

The metastasis of capitalism as the dominant economic system and social order is fast eroding the importance and values of Papua New Guinean cultures. No longer are human life, survival, sustainable living, love of nature and the environment, harmonious community living, and cooperation part of the equation; only supply and demand, individualism, competition, exploitation, mass production and procurement of goods and services, and the colonisation of places and hinterlands matter. The survival of Papua New Guineans and their cultures has taken a back seat to the free market and its subversive practices and inhuman ideologies. This is the predicament we are in as a result of the social, economic, political and cultural realities we have embraced. This is the enigma of modern development. Unfortunately, not everyone understands this and there is an urgent need to put policies in place now to rescue us from despair and chaos before it is too late. Initiatives must be taken to regenerate our communities and to put in place ecologically sustainable practices that will benefit us all.

We have allowed the discourse and practices of modern development too much power in dictating our lives and in determining our destiny and survival, allowing it to control us while failing to realise that it ignores the most important variable of any social equation: humanity. And we have failed to realise, too, that it is predicated on domination of the poor and vulnerable and on the exploitation of resources to support the prodigal living standards of the rich, in the name of a 'survival of the fittest' ideology. The free market in which we place so much faith and authority is ultimately becoming the puppet master of our lives, tugging at our strings so as to bring us into line with its expected outcome. We have slowly become less human, progressively abandoning our own cultures and subscribing to a future whose prospects seem bleak.

Conclusion

The hegemony of the capitalist economic system has led us to believe that it provides the only hope and legitimate way of achieving tangible economic, political and social development, including elevating the living standards of the masses. We assumed that our exploitation and the abandonment of our systems of meaning, as well as the exploitation of our resources, the degradation of our environments, competition, individualism, and the colonisation of our hinterlands and places, were essential, natural dynamics of development and progress, and were necessary if we were to become a 'developed', 'civilised' country. This ideological hegemony gave impetus to our subversion during the colonial era and has been perpetuated by successive governments.

The problematic nature of modern development has meant its rejection by many who view it as destroying rather than enhancing people's lives. Individuals and groups have explored other ways of development that are culturally relative, environmentally friendly and economically wise. The government and citizens of Papua New Guinea must do the same, in the interests of their long-term survival and future prosperity.

Professional education in Papua New Guinea: Which direction?

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The context

How best to teach and what is relevant to teach in order to enhance student learning in professional education are questions frequently asked by educators and researchers (for example, King 1996, Margetson 1994). Two issues emerge from these questions. First is the learning framework in which to conduct the teaching and learning, and second is the resources that are necessary to implement the educational programmes. Effective implementation results in quality education. Quality is a relative term in education since there are many factors involved. By whose standards are Papua New Guineans aspiring to achieve this high level of education, and what does it take to achieve this? Much of the discussion in Papua New Guinea concerning professional education has focused on the lack of resources and the modus operandi of institutions in tertiary education. While resources are necessary, the fundamental question is how to effectively deliver knowledge and skills to PNG students as well as develop their professional attitudes. The suggestion might be to rethink the philosophical basis that underpins existing learning methodologies.

Are PNG students performing well under the present educational models and why? What hindrances to learning are being experienced? These questions deserve further investigation since students' creative learning can be impeded under the existing educational models (Korawali 1999).

Current learning environments

The aspirations of the Office of Higher Education as to how professional education ought to be developed are outlined in the 1990 National Higher Education Plan as well as in the Higher Education Summit Papers, entitled *Enterprise and education beyond year 2000*. It is the intention of this paper not to review these documents, but to pick up a vein of concern relevant to this discussion. The question is: what type of graduates should the higher education system be producing (Baloiloi 1996)? What needs to be done in order to produce the kind of graduate being desired? Answers to these questions might be found in the way students are being taught and the way in which they ought to learn in order to meet societal expectations.

Researchers in education, administrators and academics agree that the current methodologies are not conducive to effective learning at tertiary level. Several participants in the 1998 Huon seminar on Resources for Science and Technology

in Development recognised problems associated with how professional education is being conducted (Buschenhofen 1998). While there are academics who are innovative in their approaches to delivering courses, the current educational framework impedes creative thinking and self-learning by students. Some of the flaws are as follows:

- The methodology of teaching and learning adopted by the higher education institutions is teacher-centred. It is largely lecture based, promoting examinations in which students regurgitate prior learning. In other words, the system promotes rote learning, which results in superficial rather than deep learning. Lectures do not challenge or compel students to be creative thinkers or to develop research skills. The exception might be final year students undertaking thesis or research projects.
- Current assessment methods do not really measure students' understanding. Generally, they learn only the material necessary to pass the examinations. Again, the exception might be in thesis projects, or in design projects which are assessed by a jury (such as in architecture).
- Students do not participate in setting curriculum goals and objectives in learning and problem solving. So long as these are determined largely by the institutions as well as by third parties, students are not challenged to set personal learning goals and objectives achievable within the set course framework.
- Although there are occasional group activities, most of the learning in higher education is individual-oriented and limited to one vocational strand. Because there is no formal group interdisciplinary learning, students do not acquire the communication skills necessary in working with other professionals.
- There is no mandatory evaluation by students of teachers and subjects. Although institutions say they evaluate, they often do not do so. Most is done by academics on an ad hoc basis and is related only to the subject matter being taught. A lack of consistent evaluation means that the content and delivery methods cannot be scrutinised and made transparent, since there is no

opportunity for student feedback which might help to improve the methods being used.

- Subject relevance and the number of contact hours for most professional courses need reconsidering. Generally, contact hours per week are excessive, allowing less time for in-depth study. Relevance could be improved by consolidating peripheral subjects with core subjects. Such integration would lead to a rationalisation of subjects and a reduction in contact time.
- Course subjects continue to be compartmentalised. In other words, they are taught in isolation and no attempt is made to integrate them effectively in the learning project. This gives the perception that theory and abstract concepts have no relevance, and thus makes understanding even more difficult for PNG students.

Future direction of professional education

There is now a greater expectation by employers and the community of how graduates should perform upon formal completion of any professional course. The challenge in professional education is to develop an appropriate learning environment in which students are encouraged to be creative and to develop higher problem-solving skills which enable them to evaluate problems and then recommend the best possible solutions (Novak 1998). These are characteristics of the constructivist theory of education: a core theory of learning from which most innovative learning models are being derived (Duffy and Jonassen 1992).

The learning models currently used in Papua New Guinea are generally the behaviourist and developmental ones in which the teacher delivers knowledge and the students learn by rote. Educational researchers suggest, however, that creative production can only result from meaningful learning at any level of education (Novak 1998). This is a fundamental concept in professional education since it raises the notion of cognitive development at the highest level. Student-centred learning and integrated problem based learning are examples of educational models that promote such high order learning.

Student-centred learning

The student-centred learning model recognises that students have prior knowledge and empowers them to be in charge of their own learning, with teachers being facilitators. While there have been various definitions of, as well as misconceptions about, the model, the fundamental focus is that students are challenged to seek knowledge, to research information, and to question. This enquiry approach forms the basis from which students develop the understanding to form solutions for their learning problems or projects.

The University of Technology in Lae has decided to pursue student-centred learning. Following the vice-chancellor's address to heads of department in July 1998, the Teaching and Learning Methods Unit outlined some principles of the model (Songan 1998). Unfortunately, it will take much planning by the university to convince the various professional departments of the educational advantages of adopting this learning paradigm. The resistance to this change has been largely blamed on lack of resources.

Integrated problem based learning

Integrated problem based learning (IPBL), as used in Architecture and Building at the University of Newcastle, was developed from problem based learning (PBL), a methodology used in the medical and health science programmes. IPBL focuses on subject integration as a core feature in the course (Korawali and Kingsland 1997). Both IPBL and PBL use learning problems to emulate workplace situations and attempt to develop understanding of how professionals solve problems in professional practice. Both models of learning are linked to the constructivist theory of learning as well as to student-centred learning. The primary feature is that problems are used as the learning cues to deliver knowledge, and to develop skills and attitudes (Boud and Feletti 1991). Teachers become facilitators during tutorials, with minimal lectures given throughout the course. Peer and self-assessment methods are used, as these reflect students' self-learning (Boud 1995).

Implications for adopting a new culture of learning

If raising the quality of professional education is a developmental goal because it is demanded by society as well as in response to the current methodologies of teaching and learning, then professional education ought to develop appropriate models of learning that are effective for PNG students. Whether the student-centred model or a version based on integrated problem based learning is adopted, there are implications to consider. While these are Western models of learning, some of the fundamental features will remain regardless of which model is developed. The implications for educators might be as follows:

- Clearly define the learning model so that stakeholders understand its goals and objectives. Make expectations clear to both teachers and students.
- Let students participate in determining goals and objectives under guidance from teachers. Begin to investigate the use of contract principles to allow performance in learning to become the responsibility of students.
- Promote interdisciplinary learning, since this emulates how professionals work in real life situations. This could mean team teaching with other related vocations, and the promotion of group learning across those disciplines.

- Develop peer assessment and self-assessment methods as part of the model since these allow students to assess their progress, individually as well as in comparison with their peers. The use of competency based assessment principles is part of this process.
- Conduct student evaluation of teachers and subjects as a means of transparency in the model. Evaluations should become a matter of academic policy.
- Where appropriate, reduce the number of subjects so that there is more concentration on core professional subjects and less contact time. More time can then be devoted to in-depth individual study as well as to group work.
- Since self-study and research would be the primary focus, allow adequate funding for library resources including computers and Internet access. These are probably the essential resources necessary to help shift the focus to students' self-learning.
- Develop learning projects and problems integrating all subjects in which students gain knowledge and skills. This means a reduction in lectures, although a well-prepared lecture will provide a palette of options for students to pursue in search of solutions to the given problem or project. Integration becomes a core principle, otherwise theory and abstract concepts become meaningless.
- The use of jury and progressive assessment methods is appropriate as these allow students to provide feedback in the course of their learning. Examinations should be gradually eliminated, as these are stressful and are not true measures of real understanding.
- Integrate social morals and professional ethics into learning projects. This provides a broader education rather than a narrow focus.

Conclusion

There is a need in professional education to scrutinise how teaching is being conducted and how students are learning. Deficiencies in the existing learning environment suggest that PNG students are not being challenged. Hence, student-centred learning and integrated problem based learning are suggested as these models provide a strong basis for the quality professional education required by society. However, further research is necessary to ensure that an appropriate educational environment is developed since there are still questions to be answered. How

well would PNG students perform in a new learning culture? Is this undermining the talent of PNG students to cope with a new approach? Is there an educational model that combines Western theories of learning with Melanesian culture?

Quality professional education is paramount for national development. Intellectual development, creative thinking and multidisciplinary communication skills are the common currencies of excellent professional training. Papua New Guinea needs to rethink its educational methodologies to reflect its culture and its needs.

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Access to appropriate secondary education

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Introduction

Secondary education is crucial because it is during these formative years that young people begin to make career-related decisions. Access to appropriate education is the key to their being meaningfully engaged, leaving little time for the social evils prevalent today. Attempts to improve educational access and appropriateness are therefore very important. According to Schwab (1973), four important curriculum commonplaces – teachers, students, context and content – are necessary for making education both appropriate and accessible. These will form the basis of this paper and the presentation of subsequent practical considerations.

Principals and teachers

School staff are central to the provision of appropriate education. Principals have the greatest influence over subject timetabling, allocation of the limited funds and resources, the management and use of school facilities, and the appointment of teaching and support staff. There is evidence, however, of shortcomings in accountability and effective leadership in the Papua New Guinea (PNG) school system.

The frequency with which schools change principal during a school year is unacceptable. In one province generally known for stability in its schools administration, there were several such changes in 1998. Also, there are too many new principals without appropriate educational credentials and experience. The practice of making appointments on the basis of social contacts, rather than on merit, appears to have a strong foothold throughout the school system. Teacher stability is necessary for good education. The degree of teacher turnover has serious implications for consistency in learning. Teachers and principals should be properly screened for positions. At the risk of taking a bureaucratic approach, it would be better if the provincial education boards advertised and interviewed for vacancies. Adequate employment conditions also need to be ensured.

Concerns have been expressed about the behaviour (for example, excessive drinking, misuse of funds) of some education personnel, which has contributed to poor school administration and low staff morale. Some school leaders have been observed adopting a carefree attitude in the disbursement of funds and resources. Schools under such poor leadership are suffering. Making ad hoc decisions about limited resources is a commonplace and irresponsible practice that needs correction.

School budgets should be prepared and approved by the provincial education board before any kind of expenditure

commitment is made. Since principals have unlimited control of school funds, all school accounts should be audited yearly and be open to public inspection by concerned parents and citizens as well as the provincial education board. Such stringent policies would put principals in the spotlight in the effort to provide transparent, accountable and appropriate education. Except in a few provinces, therefore, school administration in Papua New Guinea needs much improvement.

Students

Students are the clients for whom a school is built. A number of factors determine where that will be: population, geographical location, land availability, religious considerations, and political expediency, to name a few. The powerful and mostly urban elite tend to ensure that education is accessible to their own class, while the children of the rural poor are disadvantaged. This tendency is manifested in a number of ways.

First, rural families cannot afford the very high levels of school fees, which restricts their children's access to education. Even scholarship schemes are geared for the elite and fewer opportunities exist for rural students who have to try and compete on an equal footing with urban students. This is difficult for them because national examinations reflect the urban background in which they are written.

Second, many of the elite in responsible positions send their children to international and overseas schools, and so they do not concern themselves with national education conditions. Since 1997 they have even been able to obtain subsidies for these school fees, further diverting limited government funds from the national school system. This decision was unfortunate but not surprising, given that both the government and the elite are the same powerful group that make the decisions about who gets what resources. My contention is that those who choose to go outside the system should be prepared to pay for such an education. After international, church and rich provinces' schools have their share, few resources are left for government-funded rural and remote schools. We have a moral obligation to address this neglect and not run away from the responsibility given to us by years of government assistance through taxpayers' (including farmers') contributions.

Third, the two-year stopgap Australian scholarship scheme for students should be dropped. If Australian aid is to benefit Papua New Guinea, it should not entail an acculturation and decontextualisation process (Kincheloe 1995) but should strengthen PNG culture, by building on indigenous knowledge and supporting local capacity. The associated cultural adjustment,

and re-adjustment, affects these students and, consequently, their academic performance. Basic education should take place in Papua New Guinea, with students remaining close to their culture, their families, and the context we expect them to return to afterwards. The scholarship scheme should concentrate on providing graduate education, as overseas experience is more appropriate at this level and more likely to be mutually beneficial for both countries.

Fourth, because churches are also a very powerful lobby group, they receive government funding on top of their own financial sources to advance not only general education but also, it is fair to assert, their own biased ideological positions. As the product of a church school, I believe that the education provided is single-tracked and even oppressive. The availability of government funding also leads to more church schools springing up like mushrooms. Once again, this situation is unfair and limits the government's ability to support national schools as it should, schools that are required to provide a balanced education. These schools are being disadvantaged because they receive so little of the funding cake. Equitable access to secondary schooling should be made a priority.

Context of education

In visiting a number of secondary schools, I was stunned by the huge disparities in the level of physical and operational facilities between remote/rural and urban schools, and between rich and poor provinces. Urban schools are better equipped, while remote schools desperately need basic teaching items like chalk, seed and tools. Compared with government schools, church schools appeared to have good to excellent facilities.

The differences in funding are obvious. Donor agencies fall victim to biased funding practices because they have to receive approval for their foreign aid from government, which is controlled by the elite and powerful lobby groups. Those schools I visited indicated that donor-supported schools were predominantly church based and already had excellent resource provisions well before the agencies came. But still they enjoyed preferential treatment as opposed to underfunded government schools. The neglect of national schools is unfair and unjust, as they rely solely on government support. Such neglect amounts to poor access to, and inappropriate education for, students attending government schools.

For example, in two government schools, the practical skills laboratory had few tools and whatever remained in the storeroom was either too rusty or had numerous missing parts, thus rendering it unusable. In two other government schools, students had no stools to sit on, toolsheds were empty and the school poultryhouse was lying idle. On the other hand, a few church schools in resource-rich provinces were extremely well equipped with staff and student computer labs, more than one photocopier, excellent classrooms, spacious offices, and a wide range of other general teaching facilities. One can ask what criteria do donor agencies use for the allocation of funds, and who should really be receiving these funds? The same questions could also be directed at the government.

If the government continues to ignore these discrepancies in funding (especially concerning schools that fall directly within its responsibility), it is likely that access to appropriate education will be further threatened. Remote and rural schools, particularly those in less fortunate provinces, will miss out on any form of education. If government and donor agencies paid attention to equity issues, perhaps educational access and appropriateness could be realised.

Content of education (curriculum)

Students should not come to school merely to follow basic routines of assembly, roll-call, reading prepared texts, copying chalkboard notes, doing imported exercises, doing unsupervised fieldwork, and doing unplanned homework every day. If that is the reason for schooling, then they would be better off in the village. There they would at least learn useful life skills through experiential learning. They should not be in school to be systematically and progressively deskilled, decontextualised and alienated from their communities. In fact, schools these days seem to exist to sort students into 'good' and 'bad'. Only a few progress up the educational and elite ladder to prosperity, while the majority are left to return to the villages without any dependable skills, a situation neither adequate nor desirable.

We have heard the rhetoric about the importance of appropriate and relevant education (Matane 1986). In recent times, Education Secretary Baki has called for a shift from theoretical subjects to practical subjects (Baki 1999); Governor Wenge has argued about giving priority to agriculture and practical education (Wenge 1999); and Archbishop Barnes has emphasised practical subjects like agriculture to address youth unemployment and joblessness (*Post Courier* 1999). Such concern may well be genuine, but nothing will change unless we refocus our attention on providing accessible and relevant education for our citizens.

Appropriate education comes from a curriculum which meets the contemporary needs of students. A curriculum emphasising an academic option only, as is the case in our current system, and neglecting the practical is unacceptable and should be rejected. A hybridised, or integrated, curriculum is the most appropriate for all students, with its equal emphasis on content acquisition, practical skills, life skills, employable skills, and good citizenship.

All schools must be required to teach an integrated curriculum, and not only in the so-called non-core practical areas or only after grade 10. The only plausible and equitable way to address the need to advance integrated and appropriate education for all is to give all subjects – academic and practical – equal value. The current school situation allows for a separation of subjects into two groups: the academic, considered the more important, and the practical or non-academic, treated as less important. This dichotomy provides excellent opportunities for the unfair distribution of resources, including time allocation. In so doing, practical subjects are relegated to the periphery and accorded unreasonable, inferior status. Some principals in urban schools have even decided that agriculture (a practical subject) should not be taught at all. Practical education should be accessible to urban and rural students.

Currently, practical subjects are not given sufficient time and resources for field-based activities. As a result, agriculture teachers are compelled to grow kaukau and slaughter chickens on the chalkboard, but the problem is that students cannot see the blood flow from a board, only heaps of chalkdust. Growing kaukau on the chalkboard is miseducation. Seeing blood in the form of chalkdust is a very different experience from seeing and touching a slaughtered chicken. Non-core subjects must be afforded the resources to provide the practical and experiential learning that is an essential part of appropriate education.

The current educational context also favours academic subjects because of the national examinations, which select a few students to advance up the educational ladder. Teaching to the tune of these exams is like a cult or religion, absorbing all available teaching resources to enable knowledge acquisition as the means to prosperity. A well-known church school headteacher of a supposedly integrated school told me that their major goal is to get as many students as possible to pass the national exams in order to advance to university education. This suggests a single agenda for education in secondary schools.

Knowledge and cognitive development become the single driving force for all schools, including church schools. Schools make content knowledge, especially foreign-inspired knowledge, 'privileged knowledge' at the expense of cultural and relevant education. We have come to believe that 'the hand with the pen in it is more powerful than the one without the pen'. We value academic education as more powerful than any other, and so we invest all our resources in one bank account (academic education) in the hope that the investment pays us a dividend. Freire (1970) correctly identifies such educational conceptions as the filling or banking approach to education. Despite the dividends of joblessness, unemployability and social disorder in our youth, we consciously turn a blind eye to appropriate and meaningful education. We have tried to correct the situation by offering vocational/technical education only after grades 10–12, not realising that the damage to our youth is much greater and much deeper than we imagined. We need to make appropriate education accessible now, in the formative years of our children's education. Unless we seriously invest in meaningful education, we will continue to receive 'bills' rather than dividends, with consequent social repercussions.

I have deliberately left out spiritual needs, for a number of reasons, but, more importantly, given more than 40 years of Christian education, we have seen no significant impact on our youth. While others argue that the education system has failed, I argue that the churches are as guilty of fostering the one-way mentality, banking approach to education. Perhaps it is also time for them to re-examine their educational goals more carefully in the face of mounting social problems.

Strategies for improvement

As an educator who believes in practical solutions to problems, I offer the following for consideration:

1. Principal changes should be reduced drastically and their promotions based solely on merit. Principals who do not perform well should be removed fairly and expeditiously. This applies to teacher appointments and turnover as well.
2. School budgets and audit systems should be established and compulsorily inspected by the provincial education board on a regular basis.
3. The dichotomy in subject timetabling should be abolished immediately and each subject allocated equal teaching time.
4. Integrated curriculum and teaching programmes should be developed for all subjects, and all secondary schools should be required to implement them. Such a move would eliminate the unfair distribution of resources and promote integrated teaching and practical subjects.
5. Institutions like the University of Goroka should re-evaluate their teacher education programmes to prepare teachers who can plan, teach and assess an integrated curriculum. Part of the failure of the integrated approach in the school system has been the inability of teachers to promote the concept because of deficiencies in their professional training.
6. Government and donor agencies should pay particular attention to remote and rural schools, especially those in less developed and resource-poor provinces, to ensure an equitable distribution of resources.
7. The government should establish an education resource centre with the responsibility of procuring and dispatching educational support materials to schools. Donor agencies should also support this suggestion since, without adequate resources for all schools, accessible and appropriate education will be limited to the few who have access to good schools.

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Education for what? A critical perspective

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Introduction

As we approach the next millennium, we must reflect on the gains and losses of Papua New Guinea's current education system. Our most recent educational documents reveal how our experts and leaders have established programmes to accommodate the assumed needs of the children we attempt to educate. Many different concerns have motivated the development and implementation of reform programmes, such as lowering dropout rates, developing personal characteristics needed in the labour market, helping students choose a career, cultivating a sense of accomplishment in students, and producing a supply of competent workers for business and industry.

While these are worthy goals, many children in the current system continue to experience discomfort and misfortune. One of the main reasons for this is the degree of emphasis placed on professional rather than liberal education. The school curriculum concentrates on academic skills at the expense of providing children with the opportunity to be liberated. Also, only a lucky minority will obtain employment in the formal work sector. The costly education for which many rural and urban parents pay is producing more unemployed than employed young people.

This is a well-known and documented dilemma currently facing parents throughout the country. Many wonder whether it is worth paying expensive school fees year after year for a system that continues to flood the towns and cities with unemployed youth. Is there a direct correlation between high school fees and quality education? I think not. Continual increases in fees do not equate with appropriate education for the children of Papua New Guinea (PNG). School infrastructures are prone to mismanagement and maladministration. Something is seriously wrong.

There are many explanations as to where we have gone wrong. In this paper, I will attempt to map out a possible vision for education in the future.

Education for work and for integral human development

Our national constitution clearly states that integral human development is a major goal of the formal education system. This philosophical vision is also spelt out in the Matane Committee's Philosophy of Education for Papua New Guinea. Many other PNG scholars and experts have also provided us with policy documents which continue to fill the shelves of our educational archives in Waigani. Sadly, many of their recommendations remain to be implemented.

I particularly want to discuss the goal of integral human development. We must continue to take bold steps towards educating children to realise that each and every one of them is a worthy citizen. The village communities and their value systems do a far better job than schools do in this regard. The education system must make a concerted effort to provide all children with an environment in which to fully experience their individual worth. To do that we must move away from the widely held perception of 'education for work' to a more democratic view of 'education for life' (Kincheloe 1995). Many educational experts argue that 'education for work' often pays lip-service to the promotion of opportunity and equality for vocational students while, in reality, producing a differentiated and unequal workforce (Grubb 1978:81-2, Livingstone 1987:134, Raizen 1989:4, Spring 1984:536).

Despite the nation's goals of equality and opportunity, many parents continue to witness the realities of an unequal education system. Unemployed children become alienated from their parents and the community. Where is equality and opportunity for all? How long must unemployed youth remain on the margins of society? If the urban job market cannot accommodate them, can we tap into work opportunities in the village communities? Children's concepts of meaningful employment must include the value of work in the informal rural village sector, not only that in the formal cash-earning sector. Every individual should be taught that all forms of work are good, whether in the towns or in the villages.

Kincheloe (1995) asserts that 'education for work' attempts to teach students to become docile workers, by the subject matter taught and by the way it is delivered. Docile workers are quiet, not aggressive, and therefore easily controlled. But too much docility raises the question of individual liberty and threatens true democracy. We must identify the kind of 'education for work' that the school system is exposing our children to and put in place curricula that will encourage them to conceptualise all forms of work as good.

Kincheloe (1995:24) also believes that the idea of democracy as a political benchmark that guides the interrelated educational goals of individual development and civic commitment has been missing from any discussion about 'education for work'. His argument draws our attention to the emphasis that the school system places on 'education for work'. In discussions about job training and the relationship between formal schooling and work, less attention is given to the types of citizens that are being produced and the type of society that is being built. Kincheloe (1995) warns us not to view formal schooling as a neutral enterprise, a technical activity that can only be improved

by technical innovations. Many argue that work is a technical, not a moral, pursuit and, in this context, 'education for work' has been constructed in the public mind as merely an effort to increase individual and national productivity. These perceptions are dominant in PNG's school system and must be challenged.

Many children continue to study in school environments that are known as *haus kalabus* (prison quarters). Each day, they hear 'You pass this test, it's for your own good in the future', 'You've got to work hard in order to get a good job in the future', and 'A good grade in English, Maths and Science will get you a good job'. Whilst one can appreciate the importance of increasing productivity, too much emphasis on 'education for work' alone will deny children a myriad of other experiences that should be part of their total education. Schools should be promoting an awareness in the children of the dignity of all forms of work. A wood carver in a village is just as important as a doctor or lawyer in a town or city. A subsistence farmer is as important as a pilot.

Education for dignity and democracy

The kind of education that establishes the relationship between 'education for work' and democracy would also teach our children dignity and pride, and that would pave the way for self-identity and empowerment. These qualities would ultimately allow individual students to transform their own consciousness as well as their communities with socially useful labour. Socially useful labour consists of ways in which we as individuals relate to the world around us and produce mental and physical structures for survival. One example would be a school system that helped children to understand that returning to the village and working the land to sustain a living was just as dignified as obtaining a cash-paying job in town. Since job opportunities in the village communities are plentiful, schools should be stressing the relevance of work education to village work. This would be a positive step towards developing a truly democratic vision.

Schools must play a role in the production of human values. An increased emphasis on human values in the school curriculum and in educational policies and practices would help address the goal of integral human development. Elementary school reforms have led to progress in this area. However, changes are still needed in the upper levels of the school system. Democratic reforms would help to move employers away from authoritarian tendencies and in the direction of authority sharing among increasingly well-educated workers. An emphasis on human values would also enhance workers' morale, motivation, and quality of life. Thomas Jefferson argued long ago that if we fail to apply the principles of democracy in the economic sphere, such failure will undermine democratic governance in the political sphere. Jefferson's prophecy should be the foundation for any consideration of work education (Bellah et al. 1991:100–1, De Vore 1983:6–7, Wirth 1983:9).

Democratic principles must also take centre stage in the nation's classrooms. Children must always be dealt with as fellow

human beings capable of making sense of the world around them. Every attempt must be made to make the school curriculum student-friendly. Each child must be given the opportunity for free speech. Currently, power distribution in the classroom is unbalanced. PNG schools are producing too many docile students because teachers are too authoritarian. If power became a more shared entity between teachers and students, classrooms could then become democratic learning environments.

Empowerment or regulation

One common practice is the public or unnecessary ridicule of students. A serious attempt must be made to minimise such practices. Another factor that blocks student empowerment in the classroom is regulation. Foucault (1980) documents the modernist desire to adjust individuals to the 'norm', to regulate the behaviour of large numbers of people in ostensibly democratic states. Modernist leaders learnt that the best way to produce stable and predictable behaviour was to minimise overt signs of power and to cultivate compliance in the name of reason (Kincheloe 1995:27). Foucault's assertion illuminates the regulatory practices in many PNG classrooms. A challenge for teachers is to draw the line between appropriately just, and unwarranted and excessive, school regulation. Teachers must understand that compliance has both positive and negative outcomes. I understand that they mean well, but the trick is to know when not to regulate so as to allow students' empowerment. Conscious reflection on current classroom regulation might just supply the missing link in effecting individual student empowerment.

Bilingualism

Children must be given freedom of expression in the classroom. For example, if they cannot freely express themselves in English as a foreign language, they must be allowed the use of a language in which they can do so. Classroom empowerment and language go hand in hand.

Based on my own experience of teaching English as a second language for more than 15 years, I believe that the national language policy should be seriously reviewed. Despite what we have done in the last 20 years to try to solve the problems of foreign language learning, too many students continue to struggle to express themselves properly in English. No matter how hard we try, the English language remains to be mastered, perhaps because it is taught in PNG schools away from its specific foreign culture.

Many people, nevertheless, are moving towards acculturation – borrowing traits from a culture other than one's own. For example, some children, particularly those whose families have spent most of their lives in the cities, are growing up speaking English as a mother tongue. These children are bilingual. Acculturation may have a positive effect on the teaching of English.

However, the policy on the medium of instruction needs to change. PNG's ethnic cultures (comprising more than 800 languages) must become more central in the education system. For example, if Tok Pisin is the first language of most secondary school students, its use must be allowed alongside English in the classroom. The idea that English should be the only medium of instruction must be challenged. The research literature from many multilingual and multicultural countries has long proven that an English-only policy in bilingual or multilingual classrooms often produces learners who are efficient neither in their first nor in their second language. This is contrary to the linguistic human right where all people have the right to speak their first language whenever they choose. The classroom pedagogues must make a serious attempt to reflect that. In order to preserve our indigenous cultures, our ethnic languages must play a significant role and be maintained. For example, the Kuanua language is central to learning about the Tolais, and the best place to learn that language is in its natural environment – a Kuanua-speaking society in Rabaul.

Apprenticeship as pedagogy

In concluding this paper, I would like to suggest an integrated approach for the school curriculum. During the life span of the secondary schools community extension projects (SSCEPs) of the early 1980s, students spent some of their school time in village communities, helping to establish small scale business ventures. Kincheloe (1995:296) asserts that, when young people enter a profession, apprenticeship facilitates their participation in the activities of the craft. As they interact with skilled practitioners, apprentices learn the ways of thinking and seeing required by the vocation. Kincheloe describes this as cognitive apprenticeship, which focuses attention on explicit concerns, with the cultivation of thinking as a goal of schooling. As students engage with work tasks, master craftspeople and teachers monitor their thinking in relation to post-formal goals. The SSCEP schools of the 1980s provided such an opportunity. The students experienced the realistic link between work and their classroom pedagogy. They not only learned to think like practitioners but also went beyond such thinking to new cognitive vistas. Furthermore, they made the best attempt towards achieving the educational goal of integral human development. These students became apprentices.

In PNG's schools, one often hears teachers complaining that creativity and imagination are missing from the classroom, that students are passive. When we examine the causes of this, we

often find that too much emphasis is being placed on academic pedagogy, and that hardly any learning is taking place outside the classroom. Although excursions and field trips are time-consuming to organise and expensive to carry out, a more balanced approach would mean a significant increase in out-of-class experiences. As Melanesians, we learn effectively by observing and doing, and this truly PNG learning strategy should be fully incorporated into our formal learning environments. The apprenticeship concept best accommodates the Melanesian pattern of thinking.

Furthermore, the production of knowledge takes place both in and out of school buildings, and as educators we must ensure that our students have adequate access to both sites. Maybe it is time to revisit the advantages of the SSCEP era and allow its principles and practices to guide the positive educational reforms currently taking place. The apprentice model could provide some hope for the PNG community and secondary education reforms in the not too distant future.

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The dual salary policy: An obstacle to real human and national development

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Introduction

The issue of different salary scales for national and for non-citizen (or expatriate) academics in Papua New Guinea (PNG) has been the subject of much discussion both within and outside universities. Much of the debate thus far has focused primarily on the disparity in employment conditions that presently exists between these two groups of professionals, despite their having the same qualifications and doing the same jobs. While this disparity is indeed important, I believe the real issue is: what effect has the government's dual salary policy had on university performance and productivity in particular and on the PNG community in general? This paper highlights some of the wider but very important issues pertaining to this subject.

On what principle is the dual salary policy based?

The policy of dual salaries is a national one, a legacy of our colonial masters, inherited from Australia at independence. Indeed, the policy was justified before the 1970s because the expatriate workforce at that time was more highly qualified than the national one. I say 'justified' because the dual salary system at the time was (I believe) based on the principle of fairness, that is, employment conditions on the basis of merit. The situation in Papua New Guinea is now quite different. Many Papua New Guineans now have academic qualifications and experience similar to (or in some cases higher than) those of their non-citizen colleagues doing the same jobs. Nowhere is this more apparent than at the University of Papua New Guinea (UPNG) and at Unitech, where there is a high concentration of nationals with MSc and PhD degrees from overseas universities. However, while the gap in academic qualifications has been closing, policy governing employment conditions for the two groups has not changed. Furthermore, mechanisms for checking productivity and quality at the workplace are now either not working or being abused by individuals in the system.

Some non-national academics have tried to justify the dual salary policy on the basis of the definition of 'expatriate in Papua New Guinea'. They argue that, because they come from another country, they deserve to be paid higher wages than their national colleagues, even if the latter have the same academic qualifications. This rather narrow and self-serving justification is not consistent with the principle of employment based on merit. Rather, it

appears to be based on racial prejudice: Papua New Guineans, on the one hand, and the 'rest of the world', on the other.

The government's dual salary policy is obviously way out of date and needs to be reviewed. Organisations like the Department of Personnel Management (DPM) and the Salaries and Conditions Monitoring Committee (SCMC), which advise the government on matters relating to the employment conditions of both national and non-citizen staff, have either never taken this issue seriously or do not fully understand the long-term implications of their decisions on such matters. Quite clearly, both SCMC and DPM have failed to provide leadership and direction for governments on this issue.

How does the dual salary policy affect universities?

Like most good educational institutions, universities in Papua New Guinea strive for excellence in their academic programmes. This means that the programmes must be comparable with those in the wider university community. A key factor in achieving academic excellence is to have highly qualified and dedicated staff. The universities (particularly UPNG and Unitech) recognise this and have put in place excellent career development programmes for national staff.

In most cases, this means the pursuit of higher degrees at internationally reputable universities overseas, which usually entails substantial family sacrifice to ensure the completion of such study. There is the additional loss of income many families have to endure when spouses resign from their jobs (some of them highly paid jobs) in order to support their partners while they are overseas, particularly in the case of PhD studies, which take a number of years, not to mention the cultural and social adjustments that their children have to make. Thus, the disadvantage national academics encounter is often much more than just the disparity in salary between them and non-citizen lecturers.

Despite this total commitment, universities and government (represented by DPM and SCMC) have continually ignored national academics' pleas for employment conditions to be based on merit and fairness. If government endorses the mission for excellence, then the dual salary policy is definitely contradictory to its university planning. Indeed, the policy is detrimental to the academic programmes and general development of the

universities because there will always be expatriate academics, academics who have the same qualifications as nationals. As more and more Papua New Guineans return from overseas with PhDs, this frustration over different salary levels will translate into an exodus to private industry or even to overseas (some have already left). The cost of training one Papua New Guinean to a PhD level is over half a million kina.

The UPNG National Academic Staff Association (NASA) strike early in 1999 emphasised the fact that the dual salary policy is no longer appropriate in Papua New Guinea, particularly at its universities. If the government decides to review the policy, DPM and SCMC should approach the issue with an open mind and a positive attitude.

How does the dual salary policy affect the wider community?

The basic principle of positive thinking is to precondition your mind to success. However, before you can start doing so, you must be convinced that you are equal to everyone else, irrespective of colour, race or socioeconomic background. Unfortunately in Papua New Guinea, most (if not all) of us have grown up with this feeling of not being good enough, largely because of negative government policies like the dual salary policy.

Sadly, this feeling of being inferior to all expatriates appears to have become deeply entrenched in our whole social fabric. I

see it on display in shops, markets, on the streets and at work, even in the case of very highly qualified Papua New Guineans. I have always admired John Wagambie for the very positive way in which he has dealt with situations on the rugby league field, whether at home or overseas. When I asked him why Papua New Guinea rugby league teams performed poorly overseas, his straightforward reply was 'lack of mental tenacity'. Simply, this translates to not having faith in our own abilities, lacking mental toughness in tight situations. The late Steven Bantu Biko of South Africa, when asked why he took great risks to address youth gatherings, replied: 'Change their mental frame of mind, get them to start believing in themselves and everything ANC [African National Congress] stands for will fall in place'.

Conclusion

Papua New Guineans deserve better from their government, particularly from organisations like DPM, SCMC and the universities, as well as from political leaders at all levels. The recent strikes by doctors, nurses and UPNG NASA have sent a clear signal that Papua New Guineans who have excelled in their chosen professions want to be recognised and rewarded fairly for their achievements. Politically, Papua New Guinea is 23 years old. In difficult times like the present, it is the attitude of the people as a nation that will carry us through. The onus is therefore on the government and its machinery, as well as on the political leaders, to be positive and professional in their duties also.

Development, life-modes and language in Papua New Guinea

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Introduction

In Papua New Guinea (PNG), there are an estimated 869 languages (Dutton and Muhlhausler 1991:1) shared by an estimated population of just over 3.9 million. This makes the linguistic diversity in Papua New Guinea the greatest in the region, while its average of approximately 4,500 speakers per language is one of the smallest.

One of the many languages is Motu, a minor language of the Melanesian subgroup of languages which belong to the Malayo-Polynesian group, commonly known as the Austronesian family of languages. The language is spoken by over 23,000 people of Motuan and Motu-Koita origin, who are the native inhabitants and traditional landowners of Port Moresby and surrounding areas. Approximately 4,000 of the Motuan speakers live in Hanuabada.

Port Moresby, the national capital, with a population of 195,570 and an annual growth rate of 4.69 per cent, is made up of local and migrant people from many different cultures, mostly from within Papua New Guinea but also from overseas (7,481 non-citizens). Since British New Guinea was declared a British protectorate in 1884, and Australia assumed administrative responsibility for it in 1906, renaming it 'Papua', European contact has brought about many sociocultural changes.

Rural-urban migration and intermarriage are two examples of factors contributing to changes in language use and language choice in Port Moresby. Because of the need to communicate with speakers of other languages, people are forced to use several languages, both in isolation and in combination, thus exercising language choice in the city. The three lingua francas used in Port Moresby are English, Tok Pisin and Hiri Motu. English is the official written language and is used in schools, universities, government and business. English is the language of instruction in Papua New Guinea, and is the language used in the two preschools, the two primary schools and the two high schools in and around the village of Hanuabada.

Languages at home

The results for Part 1 of the study by Mase (1995) show that, although nearly two-thirds of the respondents use only Motu at home, nearly one-third use at least one other language as well and the remaining three per cent do not use Motu at all in the home. For the majority of respondents (approximately 60 per

cent), the reason for using Motu around the home is that it is a sign of their identity – 'it is our language'. Motu gives the speaker a sense of belonging to a particular group. A mother tongue is deeply rooted in the speaker's personal and cultural identification.

The respondents' views on which languages should be learned at home indicate a language-threatening situation. Although nearly all (98 per cent) of the respondents reported using Motu, only 68 per cent thought that it should be learned at home. Only 40 per cent use English at home but 73 per cent indicated it should be learned at home. If more people want to make English the 'home' language, a shift will be inevitable.

Just over half of the respondents reported that English should be learned at home because it would help at school and work (although only five per cent reported this as the reason for it 'actually being used in the home currently'). Nine per cent of respondents said that English should be learned at home because it is a 'universal/international language'.

Languages at school

All the respondents for Part 1 of the study had attended or were attending school and 42 per cent reported that they had reached grade 10 or above. This figure is more than double the national average, which is 18 per cent of the population age group (National Statistics Office 1985). This is not surprising because Hanuabada is located in the midst of where modernisation first took place and continues to occur. An interesting point was that all the people over 50 years old had completed only grades 3–6.

Nearly all respondents (about 95 per cent) acquired English literacy and used English at school, the majority (82 per cent) reporting that this was because it is the language of instruction. As regards views about which language should be learned at school, a higher percentage (85 per cent) of respondents favour learning English, rather than Motu, at school.

People in Hanuabada believe English to be the only language for school, 'because it is the standard educational language'. It is noticeable that, whereas 40 per cent report using Motu at school, only ten per cent favour learning it at school. Of course, since most children learn to speak Motu at home, it would be strange to suggest that they would need to learn to speak it at school. But learning a language at school implies learning to write it, and this would not be learned at home.

The more favourable attitude for English than for the local language, expressed in both the home and school situations,

reveals how important English language is for people in Hanuabada. This attitude is again revealed in the respondents' responses to the questions based on the Tok Ples policy of the Papua New Guinean Department of Education. Over 70 per cent of the respondents oppose the use of Motu in preschool and grade 1.

Languages at work

Eighty-seven per cent of the respondents had one or more members of their extended family working in the formal sector earning an income. Families in Hanuabada depend on this income because their economy has changed to one that is largely based on cash.

Although 48 per cent use Motu at work, mostly in combination with other languages, for Hanuabada people English is the language of the formal sector of employment. Ninety-seven per cent use English at work; five per cent even acquired literacy in English while at work.

The language ecology of Hanuabada

Motu is not the only important language in the community of Hanuabada, but it is the one viewed as of great importance by 83 per cent of the respondents. Most of the reasons given for this indicate that the language serves the social function of expressing group identity and bonding. One-quarter of the respondents consider Motu to be vital for cultural maintenance, while 56 per cent view it as important because it is their mother tongue.

English is highly regarded (75 per cent said that it is just as important as Motu) because it is an international/universal language. Considered to be necessary for getting good jobs in the formal sector, it is also a lingua franca both within and outside the village, city and national boundaries.

Tok Pisin is considered important by 13 per cent of respondents because it is a national lingua franca and makes communication easier with non-Motuans in Port Moresby. None of the respondents indicated that Tok Pisin served the social function of expressing group identity and bonding.

Hiri Motu, the local (Papuan) lingua franca, was not specifically mentioned by any of the respondents, perhaps because they take it for granted. Indeed, it is hard to know whether, in some cases, respondents answered 'Motu' when they might have meant 'Hiri Motu'. However, Muhlhausler (1992) suggests that increased support for pidgin based on indigenous languages, such as Hiri Motu, may assist in language maintenance by keeping indigenous and non-traditional contact languages apart.

The impact of development on life-modes and language use

The second part of the study by Mase (1995) was designed specifically to investigate the 'villageness' of the respondents and of their social networks, and the relationships of these to language use.

The 'villageness' was measured using the following five indices:

- 1 where the respondent/contact spent his/her early life;
- 2 where the respondent/contact resides;
- 3 where the respondent/contact spends the working hours of the day (whether working or not);
- 4 whether the respondent/contact spends more than 50 per cent of his/her free time in the village; and
- 5 whether the respondent/contact attends village ceremonies (for example, bride-price and funeral feast ceremonies).

The language use of the respondents was measured by asking them which language(s) they would use with specific interlocutor types, for example parents, grandparents, co-worker, supervisor.

It is clear from this part of the study that there is a correlation between the 'villageness' of the respondents and of their social networks, and the respondents' language use. It is also clear that their 'villageness' and the 'villageness' of their social networks are related to their life-modes.

Hojrup (1983) based his account of life-modes on his Marxist analysis of the social and economic structures of Western European countries. Thus, for Hojrup (1983:47), the modes of production and consumption are the 'fundamental societal structures which split the population into fundamentally different life-modes'. The division of any population into these subgroups is a 'large-scale and ultimately economically driven process' (Milroy and Milroy 1992:18).

Of course, Hanuabadan society is very different from that found in Western Europe, and so one should not necessarily expect the same concepts and analyses to be applicable. For Hanuabada, it would seem useful to adopt the concept of 'life-modes' but not necessarily the explanation of their origin as given by Hojrup (1983). The appropriate life-modes for Hanuabadans seem in part economically determined (as in Hojrup 1983), but also in part determined by location of home.

Thus, in Hanuabada, one life-mode (H) comprises those who live in the village and do not work. Another life-mode (M) comprises those who live in the village, but work outside it. The third life-mode (L) comprises those who live (and most probably work) out of the village.

Each life-mode in Hanuabada gives rise to a particular set of social, cultural and linguistic behaviours, and also to a

particular network structure which enforces these social, cultural and linguistic norms.

Life-mode H comprises people who do not interact with interlocutors at work, because none of them are engaged in paid employment. They use Motu on its own with most interlocutors and mixed Motu/Other with the rest. All the people who fall into this life-mode type will have spent their early life in the village. All of them live and spend their free time in the village. Just over half will be over 40 years of age. Hardly any of the people in this type will have achieved a school grade higher than grade 10.

In particular, the villageness of all the people in this type will be high and nearly all will have networks with high villageness. In many respects, this life-mode is similar to Hojrup's life-mode 1 in that it exhibits a 'close-knit type of network structure and a solidarity ethic' (Milroy and Milroy 1992:20).

Life-mode M comprises people who use Motu with just over half of interlocutors, use Other with nearly one-third, and mixed Motu/Other with the remainder. All the people who fall into this life-mode type will have spent their early life in the village. They are more likely to be working, but they are also more likely to live and spend their free time in the village. Two-thirds will be under 40 years of age and just over half will have achieved a school grade higher than grade 10.

In particular, people of this life-mode will have low villageness, but some will have networks with high villageness and some will have networks with low villageness. In some respects, this is similar to Hojrup's life-mode 2. But Milroy and Milroy (1992:20) note that the variability in the extent to which workers in Hojrup's life-mode 2 have close-knit network ties and a solidarity ethic is a function of the wage level.

Life-mode L comprises respondents who use only Motu with about one-third of interlocutors, mixed Motu/Other with another third, and at least one other language (and no Motu) with the remaining third. People who fall into this life-mode type are more likely to be under 40 years of age, to live out of the village, to be working, and to have achieved a school grade higher than grade 10. Just over half will spend their free time out of the village.

The villageness of people in this type will be low, as will the villageness of their networks. Like the people of Hojrup's life-mode 3, those in life-mode L will be socially and geographically mobile and will have many loose ties.

Conclusion

The results of the study show that there is little support in Hanuabada for the PNG education policy on the introduction

of Tok Ples (village language) programmes into schools. Most of the respondents favour learning English, rather than the indigenous language (Motu), at school. A similar attitude seems to exist with regard to which languages should be learned at home. Although 97 per cent of respondents reported 'using' Motu at home, only 67 per cent thought it should be 'learned' at home, and, whereas only 40 per cent 'use' English at home, 72 per cent indicated it should be 'learned' at home. The reasons given for learning and using English can all be classed as 'instrumental' and be seen to relate to social mobility and improvement in employment prospects in the formal sector.

The desire for English to be learned at home, together with use of it as the medium of instruction in school, creates a language-threatening situation. If more people want to make English the home language and very few want Motu to be learned at school, a shift will be inevitable.

The consequence of a 'shift' in some bilingual/multilingual situations is that an indigenous language is gradually replaced by an outside language. As the urban city of Port Moresby develops around Hanuabada, many Hanuabadans will become 'socially and geographically mobile as they pursue their careers, forming many loose ties, particularly of a professional kind, through which innovations and influence may be transmitted' (Milroy and Milroy 1992:21). Will these Hanuabadans, in pursuit of development and modernisation, unwittingly contribute to the death of their mother tongue in Hanuabada?

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The evolving AIDS epidemic: Challenges and responses in Papua New Guinea

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The problems of sexually transmitted diseases (STDs) in Papua New Guinea (PNG) have been well documented in the past. In 1914, Dr. Walter Strong, the chief medical officer for Papua, described venereal diseases (VD) as a major problem. It was estimated that five per cent of the Trobriand Island population suffered from VD. The opening up of the Highlands, with the development of the Highlands highway, saw an increasing spread of STD. Since independence we have not been able to control STDs in PNG and by 1987, PNG had one of the highest rates of STDs in the world, at about 106 per 10,000 people. Having an STD increases the risk of catching HIV. Now, with the rapid spread of HIV/AIDS, the future development of the country is seriously threatened.

The HIV/AIDS epidemic

The first reported cases of the human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) were reported in early 1987. Six cases of HIV infection and two cases of AIDS were recorded that year. Over the past ten years there has been a dramatic increase in new cases of HIV infection and AIDS. National reports indicate that over 600 new cases of HIV and over 150 new cases of AIDS are detected each year. This is an estimate of 16 new infections for every 100,000 people – an underestimate of the real situation. In the three months January to March 1999, 185 new cases of HIV infections and 41 cases of AIDS had been reported.

HIV/AIDS in PNG affects the young, sexually active and economically important members of the community and has spread throughout the country. Increasing numbers of infants are being infected during pregnancy and birth, indicating a serious problem in the general population. AIDS is now the leading cause of death in the Port Moresby General Hospital Medical Ward. It is predicted that the figures will get worse in the next 12 months. AIDS is an undeniable threat to PNG, which should be taken seriously by everyone.

Many infected Papua New Guineans do not know that they have the virus, and many more will become infected due to the complexities of factors that facilitate its spread.

Facilitating factors for the epidemic

Papua New Guinea is probably one of the most difficult places in the world to develop interventions to address issues such as HIV/AIDS. The diversity of the country, in terms of culture,

geographic terrain, low literacy rates, and many different languages, makes it difficult to communicate with rural communities. This is compounded by the myths held about HIV/AIDS, and the different religious philosophies that can create significant differences in the way people perceive HIV/AIDS messages.

Not only do we have a diversity of cultures, but each of these cultures is in transition. The shift from a rural subsistence way of life to an urban setting, and the mixing of cultures and subcultures, makes education for behavioural change a very challenging task. Sexual behaviours are complex. In particular, polygamy in the traditional and rural setting had been well defined, but now appears to have taken on a different form within the modern setting. This makes sexual networking more complex than in the past, particularly with permissive cultural sexual encounters in traditional settings in some societies in the country.

When driven into poverty people take significant risks to make money. As the economic situation in PNG worsens the sale of sexual favours and the AIDS epidemic are bound to get worse.

Gender based violence is rarely spoken about in public because society in general sees this as a normal way of life in Papua New Guinea. The role of women in society, and their vulnerability to HIV, is an important determinant of the way the epidemic will continue to evolve in Papua New Guinea. The young population and the demographic trends indicate that a young, sexually active population is an important factor which contributes to the spread of HIV. Finally, the accountability of leaders and civil servants to the urban poor and the rural majority is a pressing factor. Unless resources are given to address the basic needs of people, and we are held accountable to every individual in the society, the fight against AIDS will continue to be a tough and difficult one.

PNG's response to the epidemic

As in many countries, there was an initial phase of denial amongst leaders, health workers and researchers, but in late 1986 the Department of Health set up the National AIDS Surveillance Committee. In June 1988 the Department of Health developed the first national policy document on AIDS control in Papua New Guinea. The document set out guidelines for HIV/AIDS control – diagnosis, prevention and care from a health perspective. The importance of other sectors was reflected with an incorporation of the implications of AIDS for churches, the role of NGOs and the legal implications of the AIDS epidemic.

The initial response to the epidemic focused on bio-medical interventions. Between 1987 and 1995, the short-term and the first medium-term plans for the prevention and control of HIV/AIDS were developed and implemented. These plans focused on screening of blood before transfusion, epidemiology, diagnosis, care and surveillance of the disease. Advocacy focused on raising political attention and ensuring a rational response to the epidemic. Population advocacy focused on informing the public about the danger of AIDS to individuals. Both the short-term plan and the first medium-term plan were supported by the World Health Organisation's (WHO) Global Program on AIDS (GPA) and the European Union.

A one-year short-term plan (STP) was drafted and approved in early 1988 and received financial support from WHO. A six-year national medium-term plan (MTP) for the prevention and control of AIDS was developed by the Department of Health and WHO in 1989. Annual work plans based on the MTP were developed by the Department of Health STD/HIV Unit, focusing on health education, laboratory support, programme management, and surveillance and control measures.

In early 1993, the Government of Papua New Guinea, through the Department of Health, requested financial support from AusAID to assist in the implementation of the national programme. AusAID has provided support through the Sexual Health and HIV/AIDS Prevention and Care Project that commenced in 1995 and is now in its final phase.

Discussions on the feasibility of developing a comprehensive multisectoral response commenced in 1994 when it was increasingly noted that HIV/AIDS was destined to affect all sectors of society. Throughout 1995 and 1996 intensive discussions took place between the Office of National Planning and the national Department of Health in consultation with UNAIDS. An interim secretariat made up of staff from the Office of Planning and the national Department of Health oversaw the development of the medium-term plan. The interim secretariat facilitated and developed the second medium-term plan that was endorsed by the Prime Minister in June 1998. This plan is now being implemented by the National AIDS Council Secretariat.

In December 1997 the national parliament passed the National AIDS Council Bill which set up the National AIDS Council and its secretariat. Leaders at this stage fully acknowledged the threat to the nation by the AIDS virus. AIDS was therefore seen as an issue that will affect everyone and that everyone should address. This saw the establishment of a multisectoral response mechanism at the national level.

Challenges for the future

The challenges faced in PNG need to be addressed with commitment through the use of existing structures by involving everyone in the community. The National AIDS Council Secretariat has taken up the role of facilitating a comprehensive, multi-sectional sustainable response to the HIV/AIDS epidemic in the country. Activities carried out in the next few years should set the basis for such a response throughout the country.

The secretariat commenced implementation of the second medium-term plan by translating the plan into a one-year action plan that was endorsed by the council. The plan of action focused on the major areas that will enable sustainable initiatives to be facilitated and implemented.

A major focus of attention to date has been the secretariat input into design of the major project to address HIV/AIDS prevention and care to be facilitated by AusAID in Papua New Guinea. The secretariat is committed to ensuring that Australian aid is managed well and has the maximum impact on HIV/AIDS prevention and care in the country.

To facilitate a comprehensive, sustainable response to the epidemic, the secretariat will be facilitating five workshops in 1999. The main objective of the workshops will be to agree on the way forward in addressing PNG's AIDS epidemic, by defining the roles and responsibilities of the different sectors.

Conclusion

Given our sociocultural and geopolitical diversity, innovation is needed in Papua New Guinea for an effective national response to HIV/AIDS. Support needs to be obtained from everyone in society for any prevention and care initiatives to be successful. It is important to note that we will continue to have an increase in the number of new infections of HIV and AIDS cases despite what is done today. What is done now will only have an impact ten or more years in the future. The fight against HIV/AIDS can only be successful through a collective effort.

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