Chapter 6

A Short History of Mineral Development Policies in Papua New Guinea, 1972-2002

Colin Filer and Benedict Imbun

The mineral policy paradox in Papua New Guinea

There was a time, during the 1980s, when Papua New Guinea was an attractive place for mineral exploration and investment, because it was seen to have a stable and user-friendly policy framework by comparison with many other developing countries. This is no longer the case. The circumstances surrounding and following the closure of the Bougainville copper mine in 1989, and the sequence of events which has led BHP Billiton to disengage from operation of the Ok Tedi mine, have both done enormous damage to the country's reputation. To read much of the recent writing on the history of mining and mineral policy in Papua New Guinea, one gets the impression — to use a colourful English phrase — that the Papua New Guinea government could not organize the proverbial piss-up in a brewery, let alone foreign investment in the mining and petroleum industries. And both of these industries have recently been in steep, if not precipitous, decline. However, closer examination of the recent history of mineral policy in Papua New Guinea, when compared with that of many other developing countries, suggests that the government has done a reasonably good job of coping with difficult circumstances and unforeseen events. So it is not at all obvious that disinvestment in either or both of these sectors is a direct consequence of mineral policies which have been poorly designed or implemented.

For the purpose of this paper, we define mineral development as the process of extracting mineral resources from the ground and converting them into mineral commodities which are then traded in a market, thus generating mineral wealth for a variety of national and foreign stakeholders. Mineral resources are understood to include oil and gas, as well as metallic ores, and they count as a form of non-renewable natural capital which can be converted into other forms of capital, but they do not count as mineral wealth so long as they lie buried in the ground. Insofar as public policy is the business of government, the role of government in allocating property rights to mineral resources, and then regulating the distribution of mineral wealth derived from their development, is bound to be a very important element in any mineral policy framework.

Mineral revenues are here defined as the share of mineral wealth which is captured or collected by the government from the development of mineral resources in its territory. Direct revenues are collected directly from the mining industry and its employees, and are specified in the fiscal component of a country's mineral policy framework, while indirect revenues are collected from other industries or individuals whose own incomes are derived from goods and services supplied to the mining industry.

While the government collects two different kinds of revenue from the process of mineral development, the developers themselves incur two different kinds of cost. First, there are the direct or necessary costs which are incurred in the process of discovering, producing and selling mineral commodities with the techniques or technologies which are currently available. Then there are the indirect or surplus costs which are incurred in the payment of taxes to the host government, the mitigation of environmental damage, the management of community affairs, and so forth. But beyond these internal costs which should all appear in a company's balance sheet, there are also external costs or externalities, which are the costs of mineral development borne by other stakeholders, including future generations. These are commonly represented as the negative economic, social and environmental impacts of mineral development whose value exceeds the amount which developers pay to compensate for such damage. The total equation of costs, benefits and impacts is another major point at issue in a country's mineral policy framework. For if developers fail to internalize the full external costs of mineral development, then the simple equation of financial costs and benefits, as registered in corporate and government accounts, will fail to show the extent to which mineral development also counts as sustainable development.

The collection and expenditure of mineral revenues was an essential part of the National Development Strategy at the time of independence, simply because the Bougainville copper mine accounted for 60 per cent of the value of the country's exports. One might suppose that the mineral policy process and framework should be no less essential to the Medium-Term Development Strategy which has since become the government's official planning statement, because Papua New Guinea still has a mineral-dependent economy. Despite the closure of the Bougainville mine, the mining industry currently accounts for about 50 per cent of the country's exports and 20 per cent of its gross domestic product, while the oil industry has been contributing half as much again. As a result, direct mineral revenues have been accounting for about one third, and total mineral revenues for as much as one half, of total government revenues from all domestic sources. Yet the significance of mineral revenues for the government's budget is not reflected in the government's own expenditure plans, because the Department of National Planning has come to regard the mining and oil industries as 'sunset industries' which cannot, by definition, be sustainable, and cannot therefore make a contribution to 'sustainable development'.

There is an element of truth, as well as an element of irony, in this one-eyed vision of the future. During the course of the next decade, government revenues derived from the mining and petroleum sectors are projected to fall to less than 20 per cent of their current levels if no new major projects are developed (Finlayson 2002). The Misima, Porgera and Ok Tedi mines will have closed, and current oil reserves will have been exhausted. Even if the Gas-to-Queensland Project and the Ramu Nickel Project (or another large-scale mining project) begin to operate in the next five years, government revenues from the mining and petroleum sectors are still projected to fall to less than 40 per cent of their current levels by 2012. Some government officials seem to think that these losses can be partly offset by a significant expansion of the oil palm industry, but their optimism is probably unwarranted, and there is certainly no prospect of any major increase in revenues from other domestic sources. So the question of whether and how the country's mineral policy framework relates to the level of foreign investment in the mining and petroleum sectors is hardly one which Planning or Treasury can afford to ignore.

In the same way that large-scale mining and petroleum projects are enclave developments within a national economy which mainly consists of small farmers and gardeners minding their own business, so it can be argued that mineral development policy has become a sort of enclave within the national political landscape. While the construction of mineral policy around the time of independence was closely related to the provisions of the national constitution, the formulation of the National Development Strategy, the passage of the first Organic Law on Provincial Government, and a set of new laws and institutions relating to the use of customary land, the subsequent transformations of mineral policy have been progressively isolated or insulated from changes in other policy domains. Even the second Organic Law on Provincial Governments and Local-level Governments has made a much smaller impact on the mineral policy framework than its designers intended, partly because they failed to grasp some of the basic features of the framework which already existed. The only other policy domain which has retained a dynamic and reciprocal connection with the mineral policy framework throughout the period since independence is that of 'environment and conservation', and that is because the environmental impacts of large-scale mining projects have been the primary focus of policies and laws relating to any form of environmental planning and management.

Our listing of the major landmarks in the development of Papua New Guinea's mineral policy framework (Box 1) is based on the narrow definition of 'policy' as something which is made by governments, even if the policy process engages a wider range of actors. We also take it for granted that mineral policy in Papua New Guinea is something which is made by the national government by virtue of its legal ownership of the nation's mineral resources, even if other actors have sometimes challenged this status. However, we shall not assume that the mineral policy process can be understood entirely by analysis of the design and implementation of successive acts of parliament, such as the *Mining Act* of 1992 or the *Oil and Gas Act* of 1998. Nor shall we assume that policies produced during the lifetime of 'a government' have been part of a distinctive policy agenda pursued by all or any members of the political coalition or parliamentary majority assembled under the leadership of a single prime minister.

Mineral development policy at the moment of independence

The mineral policy framework which prevailed in 1975 was one which took shape during the lifetime of the first and second Somare governments, from February 1972 to March 1980. Its basic features were established in discussion between a few key members of the first Somare government, supported by a team of expatriate advisers, who took the lead in renegotiating the terms of the *Bougainville Copper Agreement* and setting the initial conditions for development of the Ok Tedi project (Jackson 1982, 92). Its further refinement became the responsibility of the Minerals and Petroleum Policy Committee (MPPC) established in 1975, which was chaired jointly by the secretary of Finance and the director of the Office of Minerals and Energy, which made its recommendations to cabinet through their respective ministers,[1] and which continued to function as the voice of the national government in negotiations with foreign investors.

The substance of this policy regime is documented in five of the laws enacted by the Independent State of Papua New Guinea: the *Mineral Resources Stabilisation Fund Act* (Chapter 194) and the *Mining (Bougainville Copper Agreement) Act* (Chapter 196), both of which date back to 1974; the *Mining (Ok Tedi Agreement) Act* of 1976 and the *Mining (Ok Tedi Supplemental Agreement) Act* of 1980, both of which were later subsumed under the *Mining (Ok Tedi) Act* (Chapter 363); and the *Petroleum Act* of 1977 (Chapter 198).[2] Its basic principles were set out in two policy statements produced by the MPPC — a brief statement on *Financial Policy Relating to Major Mining Project* (1975) and a longer statement on *Petroleum Policy and Legislation* (1976). These are both summarized, discussed and endorsed in the report of the World Bank mission which visited Papua New Guinea in 1976 (World Bank 1978). Further endorsement can be found in academic literature published during or immediately after the period in question, some of which came from the pens of those expatriate advisers who played key roles in the policy process (Zorn 1973, 1977; Garnaut and Clunies-Ross 1974, 1975; Zorn and Bayne 1975; Garnaut 1981).

Box 6.1 Major landmarks in the development of Papua New Guinea's mineral policy framework

1974: Renegotiation of *Bougainville Copper Agreement*.

1974: Passage of *Mineral Resources Stabilisation Fund Act* (Chapter 194).

1975: Establishment of Minerals and Petroleum Policy Committee.

1976: Conclusion of original *Ok Tedi Agreement*.

1977: Passage of *Mining Act* (Chapter 195) and *Petroleum Act* (Chapter 198).

1978: Passage of *Environmental Planning Act*.

1980: Conclusion of (first) *Supplementary Ok Tedi Agreement*.

1986: Placer Pacific share float.

1987: Government signs Mining Agreement for development of Misima mine.

1988: Mount Kare gold rush.

1988: Introduction of Development Forum.

1988: Outbreak of Bougainville rebellion.

1989: Conclusion of Porgera Development Forum agreements.

1989: Revision of mineral policy framework by NEC decision 98/89.

1990: Conclusion of Misima and Kutubu Development Forum agreements.

1991: Conclusion of Ok Tedi Development Forum agreements.

1992: Introduction of Infrastructure Tax Credit Scheme.

1992: Passage of new *Mining Act*.

1993: IMF review of fiscal regime.

1993: Government insists on purchase of additional equity in Porgera project.

1995: Revision of fiscal regime by NEC decision 46/95.

1995: Conclusion of Lihir Integrated Benefits Package agreements.

1995: Passage of *Organic Law on Provincial Governments and Local-level Governments*.

1995: Finalisation of natural gas policy statement.

1995: Passage of *Mining (Ok Tedi Restated Eighth Supplemental Agreement) Act*.

1996: Passage of *Mineral Resources Development Company Pty Limited (Privatization) Act*.

1997: Separation of Ministry of Petroleum & Energy from Ministry of Mineral Resources.

1998: Passage of *Oil and Gas Act*.

2000: Conclusion of *Ramu Nickel/Cobalt Project Memorandum of Agreement*.

2000: Independent review of fiscal regimes for mining and hydrocarbons.

2001: Passage of *Mining (Ok Tedi Mine Continuation Agreement) Act*.

The key question addressed in the construction of this mineral policy framework was a very simple one: how could the national government capture the maximum possible share of the nation's mineral wealth in the form of mineral revenues without alienating foreign investors to an extent which would deter their future investment in the production of more mineral wealth and more mineral revenues? The importance of this question lay in a belief that the revenues derived from two very large and profitable mines, if properly applied to the task of national development, would enable the government and the country to escape their dependence on Australian aid and expertise before those mines had been exhausted. And the credibility of this vision partly depended on the fluctuating price of mineral commodities.

In 1973, the prices of gold and copper climbed to an unprecedented peak. As a result, Bougainville Copper Ltd (BCL) made an enormous windfall profit from the Panguna mine which had been opened in the previous year. Under the terms of the *Bougainville Copper Agreement* of 1967, the government got 20 per cent of the dividends paid by the company, because it held 20 per cent of the shares. But the government's equity stake in the project had been acquired at the cost of granting the company an exemption from corporate income tax for the first three years of production. So the greater part of the windfall profit was destined for the pockets of foreign shareholders.[3] This 'flight of capital' was an affront to the Eight-Point Plan which the Somare government had adopted as the charter for its National Development Strategy. This called for 'a rapid increase … in the proportion of personal and property income that goes to Papua New Guineans' and for 'an increasing capacity for meeting government spending needs from locally raised revenue'.

The Eight-Point Plan also called for 'government control and involvement in those sectors of the economy where control is necessary to achieve the desired kind of development', but the government's policy makers did not regard a mining enclave as a desirable form of development in its own right, expropriation was not a realistic option, and they could see no point in spending more money to purchase a bigger equity stake in BCL if the aim was to apply mineral revenues to the development of other sectors of the national economy. It was the fiscal component of the *Bougainville Copper Agreement* which therefore became the main point at issue in its renegotiation.

The economists on the government side were not content to wind back the various tax concessions granted in the original agreement. They went one step further, by suggesting that the rate of tax on company profits should be adjusted to reflect the total amount of such profits, so that the government, rather than the company's foreign shareholders, would capture the lion's share of any increase due to a surge in mineral commodity prices of the kind which had just occurred (Garnaut and Clunies-Ross 1975, 1983). Aside from the standard rate of corporate income tax, they proposed to levy an additional 'resource rent tax' on any amount of profit which exceeded a 'reasonable rate of return'.[4] CRA and the rest of the mining industry opposed this 'additional profits tax' on the grounds that windfall profits should be their own just reward for the huge risks involved in exploration and investment. But the government's economists maintained that 'resource rents', like royalties, should return to the real owner of the mineral resources from which they were derived. And in this case, the real owner was the nation, as represented by the national government.

This at least was the assumption made in the legislation. But once the national government had settled its accounts with BCL, it still had an account to settle with the Bougainvilleans who were threatening to secede from the Independent State of Papua New Guinea and take away their renegotiated source of revenue. The first price paid for their allegiance to the nation was an agreement to return all mineral royalties to the province from which they originated, and the second price was the organic law which authorized the establishment of provincial governments (Conyers 1976). The House of Assembly had already sought to purchase the political support of the Panguna landowners in 1966, when it agreed to grant them 5 per cent of the royalties from the mine. Now the other 95 per cent would become the main source of revenue for the North Solomons provincial government, whose share in the 'ownership' of mineral resources received additional recognition through the grant of an effective power to veto any further mineral exploration in the province.

Despite the fuss made about the fiscal component of the new policy regime, the more lasting bone of contention would be the set of property relations expressed or implied in the distribution of mineral revenues between the two tiers of government and the 'third estate' of customary landowners. But the principles governing the 'internal' distribution of mineral wealth got no mention in the policy statement of 1975. That is because the policy makers were preoccupied, at that moment, by their failure to persuade Kennecott to develop the Ok Tedi mine on fiscal terms broadly similar to those which BCL had grudgingly accepted in 1974. It took another five years for the Papua New Guinea government (and perhaps also the Australian government) to persuade BHP to take Kennecott's place. During that period, the prices of gold and copper fell to levels which cast considerable doubt on the role assigned to mineral revenues as a catalyst for state-led economic growth (Jackson 1982, 93). But then they hit another peak in 1980, just as the finishing touches were applied to the *Supplementary Ok Tedi Agreement* which, unlike the agreement of 1976, really was an agreement to develop the country's second major mine. And 1980 was the first and only year in which BCL actually paid the additional profits tax. So the key articles of mineral faith in the National Development Strategy appeared to be quite solid after all.

The self-congratulation of the individuals who framed this charter should not lead us to exaggerate the extent of its departure from the principles which had informed the negotiation of the original *Bougainville Copper Agreement* by the Australian colonial administration. Take the question of state equity in mining ventures, for example. The financial policy statement of 1975 declared that the government 'welcomes offers of minority shareholdings in major projects'. It was CRA which had originally made such an offer to the colonial administration, because this would have the highly desirable effect of giving the state a vested interest in the profitability of the mine without yielding effective control over its management (Denoon 2000, 92). At one point in the renegotiation of the agreement, the company offered to sell the government a controlling interest in BCL as a condition for its own acquiescence to the additional profits tax (Garnaut 1981; O'Faircheallaigh 1984). This was an offer which the government's negotiators sensibly declined. But they did not go so far as to question the wisdom of purchasing 20 per cent of the shares in Ok Tedi Mining Ltd, despite their recognition of the risk entailed in this commitment of scarce financial resources, and despite the prospect of a contradiction in the government's role as a shareholder and a regulator.

The tax concessions granted in the original *Bougainville Copper Agreement* owe something to the economic development strategy which the World Bank had recommended to the Australian colonial administration in 1963 (IBRD 1965). The central plank of this strategy was to foster a rapid growth in the export of primary commodities by attracting foreign investment to large-scale forestry and agriculture projects. But once the Panguna orebody had been discovered in 1964, a large-scale mining project was soon added to the shopping list. One way in which the administration sought to encourage CRA's investment in the project was to limit the ratio of output-based taxes to profit-based taxes, regardless of the length of the tax holidays to be granted during the investment recovery period. So the royalty rate was set at 1.25 per cent of the value of mine production, which was very low by the standards of the time. When the tax holidays were renegotiated in 1974, there was no question of raising the proportion of output-based taxes in the total tax package. On the contrary, the new package was a more refined expression of the fiscal principle set down in the original agreement, which is one of the reasons why it found favour with both the World Bank and the Australian government.

What, then, were the implications of the national government's decision to keep a tight lid on the level of mineral royalties, dispatch the whole lot back to their province of origin, and keep a firm central grip on the bulk of the profit-based taxes collected under the new fiscal regime? First, the national government's dependence on forms of mineral revenue that were bound to vary with the fluctuating price of mineral commodities justified the institution of the Mineral Resources Stabilisation Fund, which was meant to stabilize the amounts which found their way into the government's annual budget. Secondly, the national government had an even greater interest in limiting any further additions to the indirect or surplus costs incurred in the production of mineral wealth, which included the cost of managing or mitigating the negative impacts of development, as well as the payment of output-based taxes. Finally, in contrast and opposition to the national government, provincial governments and local landowners had little or no stake in the profitability of mineral development, and would therefore come to regard their output-based share of mineral revenues as a form of compensation for the social and environmental costs which the national government might reasonably want to exclude from the developer's bottom line.

Environmental considerations were not entirely absent from the mineral policy regime established after 1972, but they were not pursued with the degree of diligence that was applied to tax matters. A brief statement of mineral policy in the *Improvement Plan for 1973–1974* included a promise that 'the Government will have power to require the use of the most modern and effective conservation measures'; the value of protecting the natural environment was enshrined in the preamble to the national constitution; and this constitutional imperative informed the passage of the *Environmental Planning Act* in 1978. But the Panguna mine and the Ok Tedi prospect were both exempted from this legislation because the relevant development agreements were signed before it came into force. The *Supplementary Ok Tedi Agreement* of 1980 did mark an advance on the Bougainville agreements in its requirement for construction of a tailings dam, but made no advance on the original *Ok Tedi Agreement* in demanding that serious money be spent on the conduct of environmental impact studies (Jackson 1982, 82ff).

The original *Ok Tedi Agreement* contained a number of clauses which declared that the people of Kiunga and Telefomin sub-provinces (later to be known as districts) should receive preferential treatment in the project's training, employment and business development programs (*ibid.*, 163). This also represented an advance on the Bougainville agreements, because it implied the recognition of a project impact area which was smaller than a province, but larger than the area of land leased from customary landowners for the purpose of mineral development. The significance of this innovation was explored at some length in the socio-economic impact study commissioned by the Department of Minerals and Energy (Jackson *et al*. 1980). That study was also the first of its kind in Papua New Guinea, and it served to underscore the exemption of the Ok Tedi project from the provisions of the *Environmental Planning Act* because it was the government, and not the mining company, which paid for it.

The policy of discriminating in favour of the people who lived in the so-called 'area of preference' was initially justified by reference to the remoteness and backwardness of this area in comparison with other parts of the country. But it also implied the recognition of a series of graduated zones of entitlement to the benefits of mineral development which could be taken as another form of compensation for the social and environmental costs of that development. And, like the 'real' compensation payments due to local landowners, this kind of positive discrimination would seem to internalize some of those costs by adding to the indirect costs of mining itself. However, this should not lead us to suppose that the national government was more generous in its dispensation to provincial and local stakeholders in the Ok Tedi project than it had been in the case of Bougainville. On the contrary, the general feeling in Port Moresby was that the Bougainvillean stakeholders had commanded a premium which should not be allowed to function as a precedent for the distribution of mineral wealth from other projects. So there was no equivalent of the 'Panguna Regional Payment' in the compensation package allocated to the Ok Tedi landowners, Ok Tedi Mining Ltd. (OTML); OTML was not required to pay the 50c per tonne of output which BCL had been obliged to contribute to the 'Non-Renewable Resources Fund' administered by the North Solomons provincial government, and the Fly River Provincial government was not granted an effective power to veto any further mineral exploration in Western Province.

The various charters of the independent state laid great emphasis on the values of 'participation' — the participation of Papua New Guineans in a national economy which was still dominated by foreign companies and expatriate persons, and the participation of those sections of the national population who would nowadays be described as 'stakeholders' in any specific economic venture. In this respect, they were seen to make a clean and decisive break with the economic policies of the colonial administration, including those which had been designed to satisfy the World Bank. But the national constitution also spoke of the need for an 'equitable distribution of incomes' between different parts of the country, and called for the country's natural resources to be wisely used 'for the collective benefit of us all' and to be 'replenished for the benefit of future generations'. This is what we would nowadays call a charter for 'sustainable development'.

The architects of the country's 'new' mineral policy regime thought that state ownership of mineral resources and central government control of mineral revenues were both essential to the cause of sustainable development. If mineral wealth was now to be derived from one of the most remote and backward parts of the country, then the local benefits of mineral development would marginally reduce the spatial inequality of income distribution. But the area around Ok Tedi was only one of many 'less developed areas', and a small number of scattered mining enclaves would still tend to widen the gap between rich regions and poor regions unless the national government could use a significant portion of mineral revenues to achieve the opposite effect. Since non-renewable resources could not exactly be 'replenished' for the benefit of future generations, the wealth derived from their extraction should ideally be invested in another form of development in which a lot more Papua New Guineans would participate for a period which would not simply come to an end with the closure of a mine whose location was an accident of geology. But the local beneficiaries of such an accident could not be expected to make this kind of investment, especially if they had no experience of any other form of development aside from their mineral windfall. So their participation should ideally be limited to a share of mineral wealth which would be just enough to sustain the belief that they had gained more than they had lost from the development of a local resource which was 'really' a national resource (Filer 1997a).

What was this other form of development whose promotion would enable a mineral-dependent state to avoid the perpetuation of a mineral-dependent economy? By most accounts, it was a form of integrated rural development constructed on a solid agricultural foundation. But the government's capacity to realize this vision was undermined by another feature of its own economic policy. This was the so-called 'hard kina' strategy, which had the effect of aggravating that common affliction of mineral-dependent economies which has since come to be known as the 'Dutch disease' (Garnaut and Baxter 1984; Goodman *et al.* 1985; Duncan *et al.* 1998; Sugden 2002). The appreciation in the value of the national currency was thought to be a good thing because it lowered the price of the imported goods which were consumed in large quantities by urban wage-earners. But it was not such a good thing for the national producers of agricultural commodities whose prices were artificially inflated (Jarrett and Anderson 1989; Baxter 2001). Since public expenditure and public sector employment accounted for such a large proportion of formal economic activity, it could be argued that the national government's mineral revenues were simply being 'invested' in a widening economic and social division between the urban and bureaucratic elites and the vast majority of rural villagers. If the national government came to be seen as a parasite stuck to the back of the mining industry, then the legitimacy of its claims on the nation's mineral wealth would naturally be called into question.

Transformations of the mineral policy regime under the Namaliu government

The mineral policy framework established during the lifetime of the first and second Somare governments, from 1973 to 1980, began to look a little shaky during the exploration boom of the following decade, but its wholesale reconstruction did not start until 1988. The outbreak of the Bougainville rebellion is commonly cited as the key turning point in this policy process. However, for the better part of 1988, the mineral policy makers in the national capital were less interested in the rumblings of discontent from around the Panguna copper mine than in the problem of securing local consent for the establishment of a new gold mine in the Porgera Valley, at the far western end of Enga Province, while managing the fallout from the Mount Kare gold rush nearby. The sequence of events that led to the closure of the Panguna mine just added to the urgency of a process of policy reform which had already been initiated.

The origin of this process can be traced to the public or populist outcry over the windfall profits harvested by a number of senior politicians and bureaucrats who purchased large bundles of shares in Placer Pacific, the Canadian company which would become the operator of both the Misima and Porgera mines, when the shares were floated on the Sydney stockmarket at the end of 1986. The company's intention was to broaden the base of national support for these two investments by creating a new class of shareholding citizens, but the outcome was a sort of 'mental mineral boom' which not only reflected the actual boom in mineral exploration expenditures, but created a widespread conviction that huge amounts of mineral wealth were on the point of being pocketed by members of a national elite who were themselves living in the pockets of the mining industry, and could no longer be trusted to apply this wealth to the development of the nation as a whole (Filer 1997a, 238). The main target of abuse was the Finance minister, Sir Julius Chan, and the loudest voice in the opposition was that of Father John Momis, the MP for North Solomons Province, whose own campaign for re-election to parliament in 1987 was built around a demand for his constituents to get a better deal from the Panguna mine. Although Paias Wingti's ruling coalition survived that national election, and a Leadership Tribunal eventually cleared Chan of the charges levelled against him, Momis had articulated a new policy agenda for the growing number of 'mineral provinces' and 'project landowners' across the country.

The message was certainly not lost on Ned Laina and Yaungtine Koromba, the premiers of Enga and Southern Highlands, who were instrumental in persuading the National Premiers Council (NPC) to set up a Mining and Petroleum Working Committee to undertake a comprehensive review of the existing mineral policy framework. This body was established in June 1988 and its report was finished in September (National Premiers Council 1988). In the meantime, Wingti's coalition had been toppled in a parliamentary vote of no confidence, Rabbie Namaliu had been elected as the new prime minister, and he had then appointed Patterson Lowa, a member of John Momis's Melanesian Alliance Party, as the new minister for Minerals and Energy. Lowa and Momis immediately set off to Panguna to hear the grievances of the local landowners, and Lowa then ordered his officials to commission a review of the mine's social and environmental impact (AGA 1989). For his part, Namaliu recruited a pair of expatriate economists to advise him on the process of mineral policy reform, and it was their dialogue with officials in the Department of Minerals and Energy which led to the most important innovation in the mineral policy framework since the renegotiation of the *Bougainville Copper Agreement* — the institution of the Development Forum (West 1992). This was the national government's immediate response to the report commissioned by the NPC, and it was made before the outbreak of the Bougainville rebellion revealed the true extent of the local grievances which were still being assessed by the government's team of consultants.

The aim of the NPC was to influence the content of a new *Mining Act* which the Department of Minerals and Energy had begun to design in 1987. This review of the mining legislation was initially a bureaucratic, not a political, initiative, and was primarily intended to rationalize the archaic system of prospecting and mining licences inherited from the colonial era (Dalton 1988; Hunt 1989). Even after this work had begun, the previous minister for Minerals and Energy made a public policy statement which could have been written by the same group of expatriate advisers who had renegotiated the *Bougainville Copper Agreement* (but was actually written by his own officials), citing a 400 per cent increase in exploration expenditures over the previous four years as proof of the 'reasonableness and consistency' of the existing policy framework (Kaputin 1987). However, the Placer Pacific share scandal had created a climate of opinion in which the design of the new act became a hot topic of public debate. The 'general feeling' of the NPC was described on the first page of its own report:

> Here was the National Government about to completely overhaul the Mining Act, the whole legislative framework for the development of the mining industry in this nation, and it hadn't even bothered to see what the views of PGs and the landowners were on this vital issue.

Instead, the Department had been bothering to consult the newly formed Chamber of Mines and Petroleum to ensure the convenience of its legislation for the mining industry (Department of Minerals and Energy 1988).

Most of the provisions of the *Mining Act* that was eventually passed in 1992, in the dog days of the Namaliu government, were in fact the outcome of this earlier round of consultation. The innovation of the Development Forum is confined to the Minister's statutory obligation to convene one 'before the grant of any special mining lease [SML] to consider the views of those persons who the Minister believes will be affected by the grant of that special mining lease', including 'such persons as he thinks will fairly represent the views' of the applicants for the SML, the 'landholders' of the proposed SML and any other land to be leased by the applicants, the national government, and the relevant provincial government.[5] The only provision in the act which reflects the actual outcome of the Porgera Development Forum is the stipulated increase in the proportion of mineral royalties payable to the 'landholders', from 5 per cent to 20 per cent of the total collected by the state.

The text of the *Mining Act* does not reflect the extent of mineral policy reform, nor the intensity of mineral policy debate, during the four years of the Namaliu government. The Porgera Development Forum resulted in three separate agreements between the national government, the Enga Provincial government, and representatives of the Porgeran community which were finally signed in May 1989, and which contained a variety of undertakings that were not reflected in the *Mining Act* (Derkley 1989). The SML landowners (and their children) were to receive a grant equivalent to 13 per cent of the royalties derived from the mine, while another 10 per cent would accrue to a body known as the Porgera Development Authority, which was to be responsible for the delivery of additional public goods and services to the people of Porgera District. The Enga provincial government would be very generously compensated for the diminution of its own share of the royalties by means of a 'special support grant' from the national government, at the rate of one per cent of the value of mine production, for the first decade of the mine's operation.

Arrangements were made for the provincial government and the landowners to acquire 49 per cent of the state's 10 per cent equity stake in the Porgera Joint Venture (PJV), with an option to purchase the remaining 51 per cent after five years.[6] The national government promised to make the mining company phase out the practice of commuter mining and build a mining town at Porgera, because representatives of the local community were determined to gain the development benefits which would flow from the process of urbanization. Even before these agreements were finalized, cabinet had decided that those provisions which related to the distribution of mineral wealth between the three parties to the forum process should henceforth be part of the general policy framework. So these were incorporated into a 'basic mining package' which was used as a template for new benefit-sharing agreements to cover the Ok Tedi and Misima mines, both of which were already in production, and then to cover the development of the Kutubu oilfield, despite the fact that this would not be covered by the provisions of the new *Mining Act*.[7] At the same time, those clauses in the earlier Bougainville and Ok Tedi agreements which obliged the mining companies to implement training and business development programs were now incorporated into a standard mining development contract which was to be used as a template for future agreements between the state and the developers of new mining projects.[8]

While project coordinators in the Department of Minerals and Energy were busily negotiating new 'packages' for landowners and provincial governments in different parts of the country, the managers of the Porgera mine thought they detected a major flaw in the forum agreements to which they had not been a party. It appeared that both levels of government were failing to keep some of their promises to the local community, and community representatives were understandably annoyed. One particular source of annoyance was the national government's apparent failure to do anything about its promise to make Placer Niugini phase out the practice of rotating its 'fly-in/fly-out' workforce through the grey skies of Porgera. The company had good economic reasons for maintaining this practice, and most members of its commuting workforce had no desire to bring their families to Porgera (McGavin, Jones and Imbun 2001). However, the managers also understood the importance of maintaining the political support of the local community for the continued operation of the mine, and the local community now comprised a volatile mix of Porgeran landowners and immigrants from other parts of Enga and the Southern Highlands who were grasping after a share of the mine's economic benefits (Jackson and Banks 2002). So they persuaded Treasury officials to introduce an 'infrastructure tax credit scheme' in the 1992 budget. This entailed an amendment of the *Income Tax Act* which would allow the developers of large-scale mining and petroleum projects to spend up to 0.75 per cent of their gross revenues on the construction of social and economic infrastructure, and to have this counted as corporate income tax already paid to the government. This meant that Placer could use its own engineering capacities to satisfy some of the local community's demands for urban infrastructure, while also doing 'good works' for people in adjoining areas, hence reducing the incentive for them to come and settle in the vicinity of the mine. After all that, they could bill the government for their achievement.

Although this measure would bring about a further transfer of mineral wealth from the national government to mineral provinces, and hence a further dilution of the principles embodied in the previous mineral policy framework, it was actively supported by officials in the Department of Minerals and Energy. This was partly because they understood the economic logic of commuter mining, and had already adopted it as an article of faith when they persuaded cabinet to approve Placer's fly-in/fly-out scheme for the Misima mine in 1987.[9] But more importantly, perhaps, they were painfully aware of their inability to make other national government agencies, let alone provincial governments, honour many of the commitments embodied in Development Forum agreements, even if they thought that these made sense. Even if the Department of Finance and

Planning made timely payments of special support grants to provincial governments, the national government had no way of ensuring that these funds would be used to meet provincial government commitments to project communities. Now at least the Department of Minerals and Energy would have the power to monitor and approve expenditures proposed by developers under the tax credit scheme.[10]

If the institution of the Development Forum and the tax credit scheme were the means by which elements of the national bureaucracy managed to take the heat out of political demands for the redistribution of mineral wealth between different layers of government, or between the state and 'project landowners', this was not the only aspect of the mineral policy framework which came under fire during the lifetime of the Namaliu government. Three other issues became the subject of acrimonious debate. One was the environmental impact or 'external cost' of large-scale mining projects, especially the Panguna and Ok Tedi copper mines. Another was the state's claim to ownership of mineral resources. And a third was the form and extent of national participation in the oil export industry which was about to be established. In all three cases, the same government officials who took credit for inventing the Development Forum were less inclined to tamper with the status quo, but still had a hard time defending it.

The environmental impact of the Panguna mine was one of the issues which aggrieved the local landowners, though the extent of its contribution to the outbreak of the Bougainville rebellion is a matter of some debate (Filer 1992). In April 1989, cabinet tried to close the proverbial stable door on the bolting horse by appointing a committee, under the chairmanship of John Kaputin, the former minister for Minerals and Energy, to investigate the causes of the crisis and devise a strategy for renegotiating the *Bougainville Copper Agreement*. After three years of deliberation, the committee recommended the establishment of a special tribunal to deal with the environmental impact of large-scale resource projects (Kaputin 1992; Wolfers 1992), but no action was taken to implement this recommendation because the government's response to the Bougainville rebellion had by then been detached from the mineral policy process.

The discharge of waste rock and mine tailings into the Ok Tedi River had been an issue ever since the government approved the 'interim tailings scheme' proposed by OTML after a landslide had halted work on the construction of a permanent tailings dam at the beginning of 1984. The end of 1988 was the deadline by which the government required the operating company, BHP, to report on the feasibility of alternative waste retention options under the *Sixth Supplemental Agreement* of 1986. The company worked out that the cost of storing all the waste material would be K1.2 billion (Filer 1997b, 60). Politicians from Western Province, including a former minister for Environment and Conservation, were adamant that a dam should be built or the mine should be closed. The government commissioned two environmental impact studies, one being a study of the other, but by the time the second study had been finished, OTML had announced an operating loss of more than K8 million for the first half of 1989, and BCL had abandoned its efforts to re-open the Panguna mine. The bean counters in the bureaucracy had little trouble in convincing cabinet to ratify the *Seventh Supplemental Agreement* in September 1989, which essentially allowed BHP to continue business as usual. In May 1990, OTML was pleased to report an end-of-year profit of more than K24 million, and was able to portray itself as the saviour of the public purse (*ibid*., 61).

The public purse had certainly not received any significant share of the estimated K150 million which a small army of amateur miners had extracted from the vicinity of Mount Kare following the accidental discovery of large nuggets of colluvial gold in January 1988 (Ryan 1991; Vail 1995). While the Mount Kare gold rush was a source of some irritation for CRA, which already held a prospecting authority over the area, its impact on mineral policy was not really felt until the party was all but over. In July 1990, parliament passed an amendment to the *Mining Act* which was sponsored by one of the national MPs who had made a handsome personal profit out of the gold rush, and which had the effect of giving customary landowners exclusive rights to any gold which lay within twenty metres of the surface of the ground, regardless of any tenement already held by a mining company. The purpose of this political manoeuvre was to block a plan hatched by officials in the Department of Minerals and Energy to compensate CRA for its costs and losses by issuing a special mining lease to a joint venture which the mining company had formed with a local landowner company which it had helped to establish.

The bureaucrats were able to persuade the prime minister to block gazettal of the amendment while their own scheme was implemented, but this only had the effect of provoking many local 'stakeholders' (including national politicians) whose earlier participation in the gold rush had whetted their appetite for a share of any further profits to be made out of the area. They already had a champion in lawyer and Pangu Party stalwart Peter Donigi, who had been arguing for some time that Section 7 of the *Mining Act* and Section 5 of the *Petroleum Act*, both of which vested mineral rights in the state, were inconsistent with Section 53 of the national constitution, which protects citizens from 'unjust deprivation of property' (Donigi 1994). He orchestrated a series of court actions around the Mount Kare case which helped to delay the passage of the new *Mining Act*, even though they did not validate his argument.[11]

Perhaps his argument was validated in another way, when 'dissident landowners' mounted the first of two armed attacks on CRA's mining camp in March 1991. Later that year, the Minerals and Energy secretary cited the court actions as one of three factors, along with the Bougainville rebellion and the general decline in law and order, which would explain the anticipated decline in exploration spending in both the mining and petroleum sectors.[12] When a second raid took place on the mining camp in January 1992, the government reacted by creating a special police squad, known as the Rapid Deployment Unit, to provide 'round-the-clock security' for major resource projects, and this outfit was deployed to Porgera in June that year (Filer 1998).

The same session of parliament which agreed to amend the *Mining Act* to thwart CRA's designs on Mount Kare declined to amend the *Petroleum Act* in a way that would have thwarted Chevron's plans for development of the Kutubu oilfield. Unlike the amendment to the *Mining Act*, this second amendment had been the subject of intense public debate for several months. Towards the end of 1989, five prominent national capitalists, including the ubiquitous Peter Donigi, proposed that the right to build and own the oil pipeline and other export facilities should not be granted to the Kutubu Joint Venture (KJV) (to which the state would be a party), but should be vested in a separate corporate vehicle, to be known as the Papua New Guinea Pipeline Company, in which Papua New Guinean citizens and national institutions would hold at least 51 per cent, and foreign oil companies no more than 20 per cent, of the shares. Senior bureaucrats were alarmed by the threat thus posed to the profits of the private partners in the KJV, because it meant that they would not be able to depreciate the cost of pipeline construction against their liability to corporate income tax (Brunton 1992). Together with industry representatives, these officials were able to convince a majority of government ministers to oppose the proposal, partly by playing on the fear that the proponents were out to make a profit for themselves, rather than the nation as a whole (Filer 1997a). The petroleum development licence was issued at the end of the year, and the KJV duly built its own pipeline.

However, in January 1992 the prime minister revived the spectre of nationalization when he announced a cabinet decision to establish a 'PNG National Oil and Gas Company' to undertake 'tanker, transport and bunkering operations, marketing and administration, including sale and purchase of oil and gas resources to and from the country, and upstream and downstream development and processing of oil and gas resources' and also to act as a 'tenders and coordination body to ensure equal local participation in the industry' (*Papua New Guinea Post-Courier* 24 January 1992). The Minerals and Energy minister complained that neither he nor his department had been consulted about a proposal which appeared to contradict existing government policy (*Papua New Guinea Post-Courier* 28 January 1992), while the Finance and Planning minister, who also denied any part in the decision, suggested that it might have been based on cabinet's failure to remember the existence of the Mineral Resources Development Company, which had long been established as the vehicle of state participation in the industry (*Papua New Guinea Post-Courier* 18 February 1992).

It soon transpired that the proposal had been contained in a letter from the managing director of a Singaporean company, Quest, to the Foreign Affairs minister, Sir Michael Somare, and the secretary of the prime minister's department, Brown Bai, which one waggish commentator described as a case of 'senior Government officials writing a letter to themselves on a foreign company's letterhead' (*Papua New Guinea Post-Courier* 21 February 1992), because it turned out that Somare and Bai had been nominated as the company's joint owners when its articles and memorandum of association had been submitted to the Registrar of Companies (*Times of PNG* 20 February 1992).

Sir Michael's oil and gas adventure was reminiscent of a deal which he previously tried to make with an American financier to relieve CRA of its equity stake in BCL and thus remove what he believed to be the major obstacle to peace in Bougainville. In both cases, he evidently felt that he was dealing with a multinational corporate cabal which had hijacked the country's mineral policy process and hoodwinked his ministerial colleagues. On the eve of the 1992 national election he announced that he would like to have all existing resource development agreements renegotiated once a new government had been installed, and instantly wiped K200 million off the value of Papua New Guinea resource stocks on the Australian Stock Exchange (*Papua New Guinea Post-Courier* 20 May 1992). Just for good measure, he called for the minister and the secretary of Minerals and Energy to be sacked because they had allowed Chevron to start exporting oil without doing anything about the National Oil and Gas Company (*Papua New Guinea Post-Courier* 22 June 1992). Meanwhile, Namaliu had disowned Somare's remarks, and called instead for all leaders, especially the leader of the opposition, Paias Wingti, to take a strong stand against the 'carpetbaggers, crooks and spivs' who had come to pick the fruits of the mining industry. And he did not mean CRA.

Dilemmas of distribution and disinvestment

After the national election of 1992, Namaliu and Somare found themselves back on the opposition benches, as Wingti had the numbers to secure his second term as prime minister, appointing Julius Chan as his minister for Finance and Masket Iangalio as his minister for Mining and Petroleum. If the officials in Iangalio's department thought they had done a reasonable job of protecting the industry from excessive political interference, they were soon to find that the loss of their 'energy' function was matched by a drastic loss of political influence. Wingti and Iangalio did not have an axe to grind with the oil industry, but did have their sights set on Porgera and Mount Kare. In that context, they took their advice from two of the characters who might have been the object of the previous prime minister's disparagement — Australians Denis Reinhardt and Robert Needham.

Reinhardt's role was to arrange alternative sources of finance to find and develop the rich prize still thought to lurk beneath Mount Kare, while Iangalio and other Engan politicians set about the task of prising CRA from its prospecting authority. This task was accomplished in March 1993, in circumstances which heralded the company's later decision to abandon the whole country (Filer 1998). Needham had been the managing director of Placer Pacific at the time of its famous share float, and he had long since convinced Wingti that Placer had deliberately misled the government over the value of the gold reserves at Porgera in order to discourage the government from exercising the full extent of its option to take up equity in the project. In September 1992, Wingti had him appointed as managing director of the Mineral Resources Development Company, and in the following month, word of the government's intention to renegotiate the *Porgera Development Agreement* reached the pages of the Australian press, from where it inspired a further loss of K450 million in the value of Papua New Guinea resource stocks (*Papua New Guinea Post-Courier* 12, 16 October 1992).

This was indeed a bad month for Porgera, because a member of the Rapid Deployment Unit which had been sent to guard the mine from the forces of darkness allegedly shot and killed a local landowner, thus provoking an armed assault on the company's residential compound which cost about K1 million in repairs and improvements to security installations, and which also frightened a number of staff and workers into tendering their resignations. However, after five months of grumbling about the prospect of 'expropriation', each of the other three partners in the Porgera Joint Venture finally agreed on a price at which to sell the government an additional 5 per cent stake in the project, thus raising the government's share to 25 per cent of the total equity.[13]

Iangalio, Reinhardt and Needham then turned their attention to the Lihir gold prospect, whose development had been delayed by the persistent dithering of Kennecott and its eventual owner, Rio Tinto Zinc. Iangalio caused RTZ to dither even more when he announced that the state would take up its full entitlement to 30 per cent equity in the project and would take another 20 per cent at cost if the company failed to sell that 20 per cent stake to a third party. Reinhardt proposed that a separate company should be formed to develop the project in place of an unincorporated joint venture, while Needham was doing a separate deal with the Malaysian Mining Corporation, whereby it would acquire a 20 per cent stake in the project on the same terms as the government if it managed to arrange finance for the government's own 30 per cent stake. This arrangement was apparently confirmed in talks between Wingti and the Malaysian prime minister, but Iangalio had now decided to support Reinhardt's proposal, and used this as the basis for further talks with RTZ after the company had annoyed the government by selling off part of its equity without prior consultation. Meanwhile, the local landowners had decided that the 'spare' 20 per cent equity stake should belong to them, and made this the sticking point in the first Development Forum convened in November 1993 (Filer 1995).

Wingti moved Iangalio to the Finance ministry in January 1994. The new Mining and Petroleum minister, John Kaputin, decided to suspend talks with RTZ until the company's chairman agreed to come to Papua New Guinea to talk to the prime minister. Needham produced an alternative development plan known as the 'Lihir Mining Study', but would not reveal its contents to other government officials. In April 1994, Iangalio used his own ministerial powers to have Needham fired from his position. Kaputin responded by attacking Reinhardt's role as Iangalio's adviser, but then hired another consultant to review Needham's scheme. This consultant, who was formerly the managing director of OTML, told the minister that RTZ now had the better proposal, and supported Reinhardt's idea of floating a separate company to develop the project. By the end of August, the RTZ chairman, Sir Derek Birkin, had finally agreed to the minister's demand that he should come to Papua New Guinea in person, but before he could meet with the prime minister, parliament had voted to remove Wingti from office.

One of the first public undertakings made by the new prime minister, Sir Julius Chan, was to 'fast-track' the development of the Lihir mine. His interest in the project was partly due to its location in his own constituency, but partly also to his knowledge that the government was virtually bankrupt. [14] The appointment of John Giheno, a Pangu Pati pragmatist, as the new minister for Mining and Petroleum did much to relieve the siege mentality of the Mining Division staff who worked in General Macarthur's wartime headquarters. Giheno was able to reconvene the Lihir Development Forum in February 1995, the Mining Development Contract was signed in March, and in April the leaders of the Lihir community were finally persuaded to accept an 'integrated benefits package' containing all the compensation and benefit-sharing agreements in which they had an interest.[15] In October 1995, amidst great public fanfare, the partners in the Lihir Joint Venture each sold off more than half of their equity in the project through an 'initial public offering' of shares in the new development company, Lihir Gold Ltd, and this provided a large chunk of the finance required for construction of the mine. More to the point, it enabled the state to pay for most of its own share of the development costs, because the price at which it had exercised its option to take a 30 per cent stake in the project was considerably less than the price at which it had now sold part of that stake to the public.[16]

The significance of this point was that the state had still not found the wherewithal to pay for the additional 15 per cent stake in the Porgera mine which it had demanded from the other joint venture partners in March 1993. From the earliest days of the Chan government, those officials who were privy to the scheme to develop the Lihir mine by means of a share float had persuaded their political masters to go one step further, and sell off a proportion of the equity already held by the Mineral Resources Development Company. The 1995 budget contained an undertaking to sell off a fairly modest proportion of the state's equity in the Ok Tedi, Porgera and Kutubu projects, but the *Mineral Resources Development Company Pty Limited (Privatization) Act* of 1996 led to the flotation of another public company, Orogen Minerals Ltd, which was to take over all of the equity previously held by MRDC, except for those assets held in trust for landowners and provincial governments under Development Forum agreements.[17] The state would retain a 51 per cent stake in Orogen, and Orogen would have first option on any equity which the state might choose to acquire in new mining and petroleum projects (if this were not reserved for landowners or provincial governments), but Orogen would not have the power to force the state to exercise its own equity option. By this device, the government was not only relieved of some of its existing debts, but also began to travel the path prescribed by most orthodox economists for more than a decade, which was to recognize that the state equity option was bad for business and bad for the state (see Goodman *et al*. 1985, 138; Tilton *et al*. 1986, 26).[18]

Nevertheless, the government had been obliged to pay a price for insisting that it could not afford to 'carry' the 20 per cent equity stake in the Lihir mine which local community leaders had been demanding since 1993. The landowners were only persuaded to accept a smaller 15 per cent stake (which was then diluted by the flotation of Lihir Gold Ltd) in return for an increase in the royalty rate from 1.25 per cent to 2 per cent of the value of mine production, and hence an increase in the value of the 50 per cent share of these royalties which would return to the landowners or the local government of Lihir under the terms of the integrated benefits package (Filer 1995, 69). This increase in the royalty rate would apply to all mining and petroleum projects, including those already in production, and was included in a policy package unveiled at the Papua New Guinea Mining and Petroleum Investment Conference held in Sydney in March 1995. The other main feature of this package was an undertaking to grant landowners a 'free' 5 per cent equity stake in any major resource projects approved for development after the end of that year, the cost of which would be shared between the state and the developers in proportion to their own stakes in a joint venture.[19]

Both measures would have sounded like very bad news to the investors at the conference if the government had not simultaneously promised to treat the extra royalty as a tax credit and to raise the total amount of expenditure which companies could claim as income tax already paid under the tax credit scheme from 0.75 per cent to two per cent of their gross income. Unfortunately for them, Treasury officials 'forgot' to include this latter measure in the 1996 budget, and although the extension was finally granted in the 1998 budget, this act of belated generosity was offset by the simultaneous requirement for companies to pay the full 2 per cent royalty out of their own pockets, rather than claim 0.75 per cent of it as an additional tax credit.[20]

The looming destabilization of the fiscal regime was compounded by the implications of the Organic Law on Provincial Governments and Local-level Governments which came into effect shortly after the Lihir development agreements had been signed. While this law clearly endorsed and expanded the principle of the Development Forum by requiring all three levels of government to 'liaise fully' with local landowners in the development of any natural resources, the law makers also seem to have decided that the collection and redistribution of government revenues from all natural resource sectors should also be governed by a single set of principles.[21] The organic law therefore proposed that 100 per cent of the royalties derived from any natural resource should henceforth be paid to local landowners, while the developer of any such resource should also pay, 'out of its own cost', an unspecified amount of 'development levies' to the provincial and local-level governments of the province or area hosting the development for the purpose of 'infrastructural development', 'economic development and land use follow-up', and 'community and social development'. Government officials responsible for the mineral policy framework were quick to point out that these provisions were derived from the forest policy framework, that the royalty provision undermined the principle of state ownership of mineral resources, and that the purpose of imposing development levies was already covered by special support grants and the tax credit scheme.[22] Although subsequent amendments diluted the wording of the clause which related to royalties, they left the development levies intact, and even added a requirement for developers to provide all three levels of government with 'expertise and professional advice' about their use (Filer 1997a, 248–9).

Despite the air of additional uncertainty thus imparted to the mineral policy framework, the saving grace of the organic law was that none of the provisions relating to 'benefits derived from natural resources' would affect the substance of existing development agreements, and most could not come into effect until the *Petroleum Act* or the *Mining Act* had been replaced or amended. However, its more immediate effect was to threaten the abolition of the development authorities which had been established at Porgera and Lihir as vehicles for the collection and disbursement of mineral revenues for the benefit of the two local communities. The Porgerans were so incensed by this prospect that they threatened to close down the mine unless the preservation of the Porgera Development Authority was guaranteed by the *Local-level Governments Administration Act* which had to be passed before the new system of local government could be put in place. Their wishes were duly accommodated.[23]

The wishes of the people living near the banks of the Ok Tedi River were not so readily accommodated, despite their longstanding aggravation over the effect of mine wastes on their livelihood. They were not in a position to close down the Ok Tedi mine by force, because their territorial domains do not embrace the mine site or the route through which the mine is supplied and its product is exported. They were not party to a compensation agreement with OTML, they had not participated in the Ok Tedi Development Forum, nor had they seen any noticeable benefit from the swollen revenue streams which had since flowed to the Fly River Provincial government. The new organic law would certainly not make any difference to the other swollen stream which was their daily companion. But they did have the services of an angry anthropologist (Kirsch 2002), and from this modest start, they acquired a larger group of well-heeled foreign sympathizers, including a team of Australian lawyers who acquired a mandate to sue BHP for damages in the Victorian Supreme Court. When news of this action broke out during the final months of the Wingti government, Chris Haiveta, then leader of the opposition, described it as the work of 'foreign spivs, crooks and carpetbaggers' (*Papua New Guinea Post-Courier* 5 May 1994) — a phrase which had now been firmly entrenched in the lexicon of national political debate. With the notable exception of Perry Zeipi, the Western Province MP who had once again become the minister for Environment and Conservation, most politicians on both sides of parliament expressed very similar views throughout the period of more than two years which elapsed before BHP finally agreed to an out-of-court settlement in June 1996.

In April 1995, cabinet approved an *Eighth Supplemental Agreement* in which a new compensation package was offered to those downstream landowners who would agree to dissociate themselves from the Australian court case, and a range of penalties was proposed for those who refused to do so. The Australian judge was not at all amused by the fact that BHP's own lawyers had been party to the drafting of this piece of legislation, and found that this constituted contempt of his own court (Gordon 1997). While the company was greatly embarrassed by this finding, the Papua New Guinea government pressed on with a 'restated' version of the *Eighth Supplemental Agreement*, from which the penalty clauses had been largely removed, and a separate *Compensation (Prohibition of Foreign Legal Proceedings) Act*, which aimed to prohibit any further legal proceedings in foreign courts over claims for compensation against mining or petroleum projects in Papua New Guinea. However, once BHP had agreed to an out-of-court settlement, the government made no attempt to prosecute the former plaintiffs in the case, and allowed that they would still be eligible to receive the compensation offered in the *Restated Agreement*, despite the fact that they had failed to meet the original deadline for acceptance. In its capacity as a partner in OTML, the government also endorsed the *Lower Ok Tedi Agreement* which was concluded in May 1997, granting additional compensation to the people of fifteen villages in the area most seriously affected by the company's waste disposal practices.

Although this process of litigation, legislation and compensation generated a great deal of public debate in PNG, and a good deal of negative publicity around the world, it did not make much immediate impact on the country's wider mineral policy framework, precisely because the legal framework already treated the Ok Tedi project as a special case, and this latest episode simply underlined the government's determination to keep it that way. The passage of the new *Compensation Act* was little more than a way for national politicians and bureaucrats to compensate for what most of them felt to be a serious affront to the sovereign powers of the state. However, the internationalization of the dispute was itself a significant milestone in the mineral policy process, because it showed the extent to which this had ceased to be an exclusive process of negotiation and consultation between the host government and the foreign investor, or even between the parties to the Development Forum, and was now exposed to the intervention of a multitude of 'unofficial stakeholders' (Filer 1997b, 85).

There was at least one corner of the mineral policy domain where official business was still being conducted in the customary manner, with minimal disturbance from the pressures of public political debate. The point at issue here was the need to amend the *Petroleum Act* and the fiscal regime to facilitate development of the very substantial gas reserves associated with the oil which was already being exported from various fields in the Kutubu complex. The technicalities of a national gas policy had been under discussion for several years (see Millett 1992), but this was not the sort of talk that could ignite the public imagination. The government issued a White Paper on the subject in September 1995 (PNG 1995), and that was also the year in which the Petroleum Division began to receive 'technical assistance' to carry the process forward under the terms of a $US11 million loan from the World Bank.[24]

The complexity of the issues at stake was compounded by the appearance of two different proposals for development of the gas reserves. British Petroleum, the operator of the Hides Gas Project which already supplied electrical power to the Porgera mine, was investigating the feasibility of a liquid natural gas project with an onshore liquefaction plant (CIE & NCDS 1997), while Chevron, the operating partner in the Kutubu and Gobe oil projects, was proposing to build a pipeline across the Torres Strait and supply dry gas to industrial customers in Queensland. Discussion of these two proposals was primarily couched in terms of the projected economic costs and benefits to the nation as a whole, but ongoing arguments about the internal distribution of revenues and benefits from the oil industry were seen to constitute an additional political risk for the scale and duration of the investment which either of them would entail.

So the government sought additional technical assistance from the Asian Development Bank to find new ways of dealing with the 'landowner problems' which were specific to the hydrocarbon sector (Taylor and Whimp 1997).

By the time that Bill Skate took over the reins of government after the national election of 1997, a decision had already been taken to split the Ministry and Department of Petroleum and Energy from the Ministry and Department of Mineral Resources. The new policy framework for the hydrocarbon sector was legislated in the *Oil and Gas Act* which replaced the *Petroleum Act* at the end of 1998. The new act, like the *Mining Act* of 1992, was an attempt to square two different circles — one of which was about the promotion and regulation of the industry itself, while the other was about the distribution and consumption of the national share of the wealth which might yet be derived from it. The second of these circles now also had to be squared in a manner that would be consistent with the Organic Law on Provincial Governments and Local-level Governments.

The puzzles contained in this second circle were addressed in a two-day seminar convened by the Department of Petroleum and Energy in January 1998. This led to the creation of a Petroleum Project Benefits Action Team, containing representatives of several government agencies and all the main industry players, which met on numerous occasions throughout the rest of the year. The deliberations of this body may well have constituted the most extensive process of consultation between the government and the private sector over any piece of sectoral legislation in the period since independence, although they did not rate a mention in the national press. By June 1998, the Action Team had come up with drafting instructions for a separate piece of legislation to be known as the *Petroleum (Project Benefits) Act*, but the Department then decided to incorporate some of the recommended measures into the *Oil and Gas Act*, while leaving others to be treated as matters of policy or regulation.

The *Oil and Gas Act* complies with the organic law to the extent of imposing a 2 per cent 'development levy' on the wellhead value of all petroleum products, but neutralizes the fiscal effect of this measure by extending the scope of the tax credit scheme to cover the 2 per cent royalty for which developers are also liable. While this device was designed to protect the industry's bottom line, it also entails a substantial increase in the proportion of mineral wealth which is repatriated from the national coffers to the host province. The act seeks to limit the potential abuse of such revenue flows by regulating the distribution and use of the 'royalty benefits' and 'equity benefits' which the state sees fit to allocate to provincial governments, local-level governments and project area landowners, while apparently conceding that its right to regulate the distribution and use of development levies is constrained by the wording of the organic law.[25] The proportions in which the royalty and equity benefits are distributed between the local landowners, local-level governments and provincial governments 'affected by a project' are themselves to be determined by negotiation between the parties in a Development Forum. However, the act allows the minister to determine the proportions in which the landowner benefits should be subdivided amongst the landowners by reference to the extent of their rights over the land leased to the developers or the extent of the project's impact on their livelihood, and if there is more than one provincial or local-level government 'affected' by a project, the act says that their benefits shall be subdivided in accordance with the number of project area landowners in their respective jurisdictions. Furthermore, the act empowers the minister to decide who counts as a landowner, and who counts for how much of a landowner, on the basis of 'social mapping' and 'landowner identification' studies which have to be carried out before he convenes the Development Forum.

The act goes on to say that the package of royalty and equity benefits distributed through this process must not be worth more than 20 per cent of the 'total net benefit' which the State derives from any given project, and the package must be held in trust for the beneficiaries by a subsidiary of the Mineral Resources Development Company. The act then requires at least 30 per cent of the net income of a trust established on behalf of project area landowners to be spent on the provision of 'social services or community development projects', and at least as much again to be spent for the benefit of 'future generations', which means that landowners cannot access more than 40 per cent of the net income from the trust in the form of cash payments. The act also imposes a parallel form of control over the expenditure of any monetary benefits allocated to a provincial or local-level government, including that made by a developer under the tax credit scheme, by subjecting it to the oversight of an Expenditure Implementation Committee controlled by the national government.[26]

If the *Oil and Gas Act* was meant to construct an appropriate policy framework for development of the country's natural gas resources, it evidently failed to convince the moguls of British Petroleum, who decided to divest themselves of all their assets in Papua New Guinea and focus their attention on development of the Tangguh gas field in West Papua. This decision spelt the end of the proposal for a liquid natural gas project in Papua New Guinea, and thus left Chevron's so-called 'Gas-to-Queensland' project as the only feasible development option on offer to the government. It is hard to assess the extent to which BP's decision was motivated by its assessment of political risk in Papua New Guinea, rather than by wider strategic considerations, but it seems to have reduced the incentive for Chevron and its joint venture partners to expedite their own alternative proposal, while limiting the government's capacity to push them further down the road to development.

The political risks of engaging with the Skate government were certainly not lost on the IMF and the World Bank, whose withdrawal of support was one of the factors which brought about that government's downfall in July 1999. The new prime minister, Mekere Morauta, was seen in Washington as a 'friend of the Bank', just as he was seen in Canberra as a 'friend of Australia'. The Bank was now able to move forward with a structural adjustment program which had the necessary appearance of 'borrower ownership', and under that general umbrella came the design and implementation of two more institutional strengthening projects. The Gas Development and Utilisation Technical Assistance Project was meant to facilitate the implementation of the *Oil and Gas Act*, while the Mining Sector Institutional Strengthening Project was a part of a broader push to reverse the prospect of diminishing returns from a mining industry which showed little interest in the discovery and development of new resources to replace the revenues derived from existing projects. Now, for the first time since independence, the Bank was set to become a key player in the reconstruction of the whole mineral policy framework, and that was because its officials now recognized that the national government and the national economy would sink or swim in the murky waters of mineral dependency.

In the report which accompanied and justified the structural adjustment program agreed at the end of 1999 (World Bank 1999), the Bank put the final nail in the coffin of the Mineral Resources Stabilisation Fund, observing that it had long since failed to prevent the national government from mortgaging its prospective mineral revenues to finance unsustainable levels of public expenditure, and should therefore be replaced by stricter rules for the investment of such revenues.[27] The World Bank also encouraged the government to undertake a thorough review of the fiscal regime in the mining and petroleum sectors, to create additional incentives for investment in these sectors, and to restrict its own right to move the goal posts around the new playing field. The review was funded by the Asian Development Bank (Daniel *et al*. 2000), and some of its key recommendations were incorporated into the 2001 budget, including a promise to reduce and stabilize the effective rates of tax on both industries and to grant investors the right to negotiate fiscal stability clauses into their contracts with the state.[28] The main target of these reforms was the investment climate in the mining sector, but the industry's response was less enthusiastic than it might have been, first because the government had still failed to reduce effective tax rates to levels comparable with those found in many other developing countries, and secondly because these other countries were also given lower risk ratings by the likes of Standard and Poors.

In the absence of any new surge of enthusiasm for mineral exploration, the attention of government policy makers in the mining sector was now firmly focused on the question of how to close mines down rather than how to open them up (Jackson 2002). Although the 'Basic Mining Package' had included a commitment by the national government to fund the production of a 'long-term economic development plan' for the area affected by each major mining operation, this was one of the commitments which had largely been forgotten. Now that the closure of the Misima mine loomed within the government's own five-year planning horizon, officials in the Department of Mining organized a process of consultation which led to the production of a Draft Mine Closure Policy in 2000, followed by the establishment of a Misima Mine Closure Committee in 2001. While the draft policy covered a number of technical issues involved in the rehabilitation of abandoned mine sites, it also called for the incorporation of a long-term 'social and economic development plan' within the mine closure plan to be submitted by the developer as part of the approval process for each major project. This was understood to be a plan to finance the provision and maintenance of benefits for local communities after the point of closure. Although the operator of the Misima mine had already produced its own mine closure plan, had paid for the 'long-term economic development plan' which should have been funded by the national government (Jackson 2001), and was now financing the meetings of the Mine Closure Committee, there was in fact no mechanism to ensure that the people of Misima would continue to receive the benefits to which they had become accustomed under the terms of the mine development agreements. Nor was there any obvious reason why the government or the developer should pay for these people, or the members of other mine-affected communities, to receive such benefits beyond the life of each mining operation if these benefits were in excess of those provided to all other communities in the country and could not be justified as a form of compensation for the legacy of social or environmental damage caused by the mine.

The Ok Tedi mine was one whose legacy of environmental, if not social, damage would indeed be very significant. BHP was now eager to remove this blemish from its own portfolio, and was therefore looking to transfer its majority shareholding in OTML to an institution that would manage this legacy on its own account, without further risk to the Big Australian's global reputation. One of Mekere Morauta's first actions as prime minister was to ask the World Bank to review OTML's own assessment of the risks attached to its 'Mine Waste Management Project'. The Bank recognized that the best option, from an environmental point of view, would be to close the mine down immediately, but the social and economic cost of doing so would be unacceptably high, precisely because there was as yet no clear plan or strategy for managing the closure process (World Bank 2000a). Since Ok Tedi was still regarded as a special case within the mineral policy framework, and BHP's pursuit of an early exit strategy was now serving to underline its unique status, the government was obliged to respond by making further changes to the legislation under which it operated.

The *Mining (Ok Tedi Mine Continuation [Ninth Supplemental] Agreement) Act* of 2001 made provision for BHP Billiton to gift its shareholding to an entity called the 'PNG Sustainable Development Program Company' in return for a government guarantee that it would henceforth be immune to any more 'environmental claims' in respect of the damage caused by the mine. This new company was incorporated in Singapore, with a board comprising one Singaporean member, three representatives of national institutions (the Department of Treasury, the Bank of Papua New Guinea, and the Papua New Guinea Chamber of Commerce), and three people appointed by BHP Billiton.[29] The new company's basic mandate was to invest two thirds of its mining profits in a 'long term fund', and to spend the balance of its income, including the interest on this long-term investment, on the implementation of 'sustainable development projects' in both Western Province and the rest of Papua New Guinea, throughout and beyond the remaining life of the mine (PNGSDPL 2002).

The revenues available to the Program Company would be reduced by a separate clause in the *Ninth Supplemental Agreement*, which required OTML to establish and fund the *Ok Tedi Development Foundation* as a second instrument for the promotion of sustainable development in Western Province. This body would be responsible for spending K180 million on the mine-affected communities over the remaining life of the mine, of which 16 per cent was to be paid in cash to community members, 58 per cent to be provided in the form of development projects, and 26 per cent to be invested in trust for future generations. The 149 'mine-affected communities' were divided into six areas, and community representatives from each area signed up to separate 'community mine continuation agreements' which were attached as schedules to the main agreement. These uniformly state that 'the economic opportunities offered by the Company's Commitments represent to the Communities an acceptable trade off for the environmental impacts of the future operation of the mine', and this is 'the complete, final and binding basis on which they agree to support the continuation of the Mine'. Section 8 of the main agreement states that the 'signature or other execution of a *Community Mine Continuation Agreement* by a person representing or purporting to represent a Community or clan, or that person's delegate, binds all members of that Community or clan' to the agreement, including 'children and persons who are subsequently born into, or who subsequently join, that Community or clan', even if other members or representatives of the group are not party to the agreement.

If this device served to manufacture the appearance of popular consent for the continued operation of the mine, it did nothing to address the lack of government capacity to participate in the planning of mine closure or sustainable development in Western Province. In 2000, when the Fly River provincial government was in one if its periodic states of suspension, OTML was able to persuade the national government to establish a 'Western Province Capacity Building Project' whose staff would be directly accountable to a committee comprising representatives of several national government agencies, as well as OTML and the provincial government. This institution was to be funded through direct transfers of a 25 per cent share of the mining royalties and special support grant that would otherwise have been subsumed in the provincial budget, while its management and technical support costs were also meant to be covered by the government. By 2002, it was already evident that the national government could not or would not meet its own commitments, so the project's funding was limited to the royalty stream which came directly from OTML. The mining company was also covering the project's management and technical support, but was threatening to end this subsidy unless the national government abandoned the practice of placing all of its own contributions in the black hole otherwise known as the Provincial Operating Account (Simpson 2002).

When the World Bank finalized its appraisal of the proposed loan of $US10 million to the Papua New Guinea government for the Mining Sector Institutional Strengthening Project in May 2000 (World Bank 2000b), its primary aim was to strengthen the capacity of national government agencies to attract new foreign investment to the sector, rather than deal with the lack of capacity at lower levels of government or assist in the implementation of agreements already made for existing mines.[30] However, by the end of that year, Bank staff were encouraging the national government to include a 'sustainable development policy' component in the project in order to establish a common planning framework for the local and regional development strategies which had evolved around each of the country's major mine sites. This late addition to the suite of project activities was partly motivated by World Bank president Wolfensohn's decision to commission an independent review of the Bank's involvement in both the mining and petroleum sectors in response to the complaints of 'civil society' (EIR 2003). Although the Bank had not been in any way responsible for the development and impact of the Ok Tedi mine, the global notoriety of this one operation could easily lead the Bank's critics to question the desirability of strengthening the government's capacity to sustain the industry in which it was embedded.

As it happens, the contract to produce the Sustainable Development Policy and Sustainability Planning Framework for Papua New Guinea's mining sector was awarded to a team of consultants headed by the designer of the Western Province Capacity Building Project.[31] During the course of 2002, team members engaged in an extensive process of consultation with national and local stakeholders in the mining industry, wrote eight working papers for the Department of Mining, and consolidated their findings in a Green Paper published by the Department itself (Department of Mining 2003). In the event, the Department of Mining did not have the strength required to complete the policy process initiated by the Green Paper, partly because it lacked the support of other government agencies and partly because the Bank's efforts to strengthen it had only limited success (Mathrani 2003). Most of the Department's functions were transferred to a newly established Mineral Resources Authority which certainly had more resources than its predecessor, but further progress in the reform of mineral policy would have to await the implementation of a second Mining Sector Institutional Strengthening Project whose design had not yet been finalised in 2007.

Evaluation and conclusion

The evaluation of any policy process or policy framework must first confront the question of what counts as success or failure, and yet there is no single yardstick against which this evaluation can be made. For example, policies may be said to have failed because they were inherently faulty or because they were poorly implemented. Design faults may explain the failures of implementation if these failures cannot be explained by other factors which the policy makers had no good reason to anticipate. But policies are rarely made or implemented in a vacuum, so it is also necessary to consider the specific nature of these external constraints on the mineral policy process, and each of these may give rise to its own distinctive form of policy failure. Finally, and perhaps most importantly, the stakeholders who participate in any national policy process do not necessarily share the same goals, and what counts as success for one group may count as failure for another.

Papua New Guinea's condition of 'mineral dependency' (or more broadly 'resource dependency') is one that has lasted throughout the period since independence. The very fact that Papua New Guinea still has a mineral-dependent economy means that the ambitions of the dominant policy makers at the time of independence have not been realized. The country's mineral wealth has not been successfully applied to the creation of a more diversified national economy, nor has it served to reduce the country's dependence on foreign aid. Indeed, for all their problems, the mining and petroleum industries have continued to provide the bulk of the country's exports for the last twenty-five years, yet the overall rate of economic growth has barely kept pace with the rate of population growth. If this is proof of policy failure, it is not the failure of mineral policy per se, but the failure of a broader national development strategy.

For those who believe that large-scale extractive industry has more costs than benefits for a country like Papua New Guinea, the government's ability to foster investment in large-scale mining and petroleum projects would itself count as an instance of policy failure, and any activity which has obstructed this form of investment would count as a positive contribution to sustainable development. From this point of view, the Bougainville rebellion and the Ok Tedi litigation are not only proof of the failure of government policy, but also evidence of the success of other stakeholders within the mineral policy process. Yet this can only be judged as a partial success in light of the history of civil conflict in Bougainville following the closure of the Panguna mine, or the fact that the Ok Tedi mine is still operating at a profit and still causing massive environmental damage. Another kind of policy failure may now be evident in the pessimism of some national government officials who already subscribe to the 'resource curse' thesis, and therefore conclude that there is no point in making new policies for the mining and petroleum sectors or granting additional resources to those government agencies which are responsible for promoting investment in these sectors.

In one version of this argument, the failure of mineral policy has not been in the promotion of all forms of private investment in extractive industry, but in the emphasis placed on 'monster' projects, like Bougainville and Ok Tedi, at the expense of small and medium-scale activities which do not have such major impacts on the physical environment and do not place the same degree of strain on local social and political institutions. This argument applies to the mining sector, rather than the petroleum sector, because Papua New Guinea's oil and gas reserves are not amenable to small and medium-scale forms of extraction. But even in the mining sector, those who say that 'small is beautiful' — or not so ugly — fail to show how a downsized industry can sustain the levels of public expenditure which people are still demanding, and which the government can barely afford to provide with current levels of mineral revenue and foreign debt.

If the measure of good policy is derived from the mission statements of the Departments of Mining and Petroleum, then the overall level of 'responsible' private investment in the mining and petroleum sectors is the ultimate test of policy that works. The decline of exploration spending during the 1990s could thus be taken as evidence of policy failure if elements of the mineral policy framework were responsible for this process of disinvestment. If new investment occurs after recent and current changes to the policy framework have been brought into effect, this might seem to confirm the World Bank's view that good policy is the key which unlocks the process of development. On the other hand, it would also seem to imply that Papua New Guinea still has the capacity to make and implement good policies for the mining and petroleum sectors, even if it can only do so when the Bank is holding its hand. At the time of writing, it is too early to tell which way the barometer will move, but it is also possible that levels of foreign investment have declined, and might yet be restored, for reasons which are either beyond the control of specific government agencies or beyond the reach of the national policy process as a whole. The fickle and cyclical nature of the global markets for different mineral commodities is an external constraint which presents a distinctive challenge for any national policy framework.

The Papua New Guinea Chamber of Mines and Petroleum would sum up the policy failures of the national government under two headings — taxation and security (PNGCMP 2001). From the investor's point of view, the government has failed to understand the connection between these two issues by imposing additional taxes, or constantly changing the fiscal regime, in a political, economic and physical environment whose insecurity already adds to the indirect costs of investment and production. The national government's failure to apply its own share of mineral revenues to a broader national process of economic and social development has only compounded this problem, because it has contributed to the growing demand for a greater share of these revenues to be distributed to the provinces, districts or communities which host the large-scale resource projects from which these revenues are derived. This is often expressed as a demand for local people to be compensated for the social and environmental impact of these mining operations. But if the national share of mineral wealth has so far failed to contribute to a broader national process of social and economic development, there is no obvious reason to believe that a bigger local share of mineral wealth will contribute to a broader local process of economic and social development. If anything, the problem of dependency is more acute at the local level than it is at the national level. The more that local people come to depend on a single mining or petroleum project for their incomes and general welfare, the more they are likely to lose when the process of extraction comes to an end.

By contrast with the forestry sector, we cannot simply say that Papua New Guinea's mineral development policies have failed because developers have failed to comply with them or because the government has lacked the capacity to make them do so. Although the industry has frequently complained about the additional surplus costs which the government has imposed upon it, there has also been a recognition of the need to incur such additional costs, even beyond the level required by national government policy, as the price of securing local political support for its operations. At the same time, the industry has been held accountable for its compliance with government policy through the scrutiny of its own shareholders, by the financial institutions on which it is partially dependent, and by the 'civil societies' of the developed world where it is domiciled (Filer 2002). In these respects, it is quite unlike the logging industry in Papua New Guinea, which is dominated by a small group of family-owned companies domiciled in Malaysia.

Some critics have argued that the Ok Tedi court case and the *Eighth Supplemental Agreement* demonstrated the inability of the national government to regulate an industry in which it had a vested interest, and this contradiction in the role of government was a kind of policy failure in its own right. But if we consider the whole history of debate about the management of Ok Tedi's waste materials, it is clear that the government has kept its own counsel on the merits of the 'trade-off' between economic benefits and environmental costs, and the only obvious evidence of policy failure here would have to be found in a contradiction between the Ok Tedi agreements and the national constitution. And once we look at the bigger picture of relationships between the government and the mining industry, it would be hard to explain the howls of protest with which the industry has greeted many of the government's mineral policy reforms unless the industry is playing a very elaborate double game.

Those critics who find evidence of policy failure in the state's subordination to international capital, or in the contradiction between the government's twin roles as shareholder and regulator in the mining and petroleum sectors, also tend to overlook the deepening divide between the central agencies and the line agencies responsible for various aspects of the mineral policy framework. The Departments of Mining and Petroleum have indeed been driven to defend their respective industries, and to collaborate more closely with the Chamber of Mines and Petroleum, because the rest of the government has either ignored their concerns or made new policy decisions which only add more clouds to a difficult investment climate. In the period from 1974 to 1992, there were policy brokers on both sides of the divide who were able to negotiate a 'whole-of-government' approach to mineral development policy, even while politicians were deviating from the path of righteousness. It may be true that the exploration boom of the 1980s induced a sense of complacency that was rudely interrupted by the outbreak of the Bougainville rebellion, but the simultaneous invention of the Development Forum demonstrated their collective capacity for adaptive management of major policy issues, and has been applauded as a ground-breaking measure by the global policy community (MMSD 2002, 211). What should have followed was a clear articulation of the principles to be applied to the internal distribution and management of the government's mineral revenues, but what happened instead was a lengthy political bunfight over the development of the Lihir gold mine and the parallel design of a new organic law which actually undermined the existing mineral policy framework.

If multinational mining and petroleum companies have their own reasons for implementing national government policy, or being seen to do so, this obviously lightens the load placed on the government's own regulators. But it should not blind us to the real decline in the capacity of the relevant line agencies to accomplish any of their tasks. Like many other government departments, those responsible for promoting and regulating the mining and petroleum industries now operate with budgets whose real value has fallen by more than two thirds in the space of a decade, and whose staffing levels have declined accordingly. Most of the national and expatriate government officials who were involved in the transformation of the mineral policy regime under the Namaliu government or the negotiation of the Lihir project agreements under the Chan government have since defected to the private sector. Their place has been taken by donor-funded consultants who can certainly help to design new policies, but cannot readily create the conditions under which they will be jointly implemented by a number of different government agencies. It is somewhat ironic that the two government agencies which are responsible for promoting the industries that generate as much as half of the government's domestic revenues should now be dependent on loans and grants from donor agencies in order to conduct their business.

References

Applied Geology Associates (AGA). 1989. *Environmental Socio-Economic Public Health Review: Bougainville Copper Mine, Panguna*. A Review Completed for the National Executive Council of Papua New Guinea. Wellington: AGA.

Banks, G. 2002. *Sustainable Development Policy and Sustainability Planning Framework for the Mining Sector in Papua New Guinea*. Working Paper 5: Landowner Equity Case Studies. Port Moresby: PNG Mining Sector Institutional Strengthening Project.

Baxter, M. 2001. Enclaves or Equity: The Rural Crisis and Development Choice in Papua New Guinea. *International Development Issues* 54. Canberra: AusAID.

Brunton, B. D. 1992. *The Struggle for the Oil Pipeline in Papua New Guinea*. Discussion Paper 68. Boroko: National Research Institute.

Brunton, B. D. 1994. *Constitutionality and Resource Development in Papua New Guinea*. Discussion Paper 77. Boroko: National Research Institute.

Centre for International Economics and National Centre for Development Studies (CIE and NCDS). 1997. *Gaining from Gas: The Economic Contribution of the Papua New Guinea LNG Project*. Canberra: Centre for International Economics.

Conyers, D. 1976. *The Provincial Government Debate: Central Control Versus Local Participation in Papua New Guinea*. Monograph 2. Boroko: Institute of Applied Social and Economic Research.

Dalton, D .L. 1988. Papua New Guinea: resources legislation and policy. In *Australian Mining and Petroleum Law Association Yearbook 1988*, 100–124. Melbourne: Australian Mining and Petroleum Law Association Ltd.

Daniel, P., K. Palmer, A. Watson and R. Brown. 2000. *Review of the Fiscal Regimes for Mining and Hydrocarbons*. Port Moresby: Asian Development Bank for PNG Tax Review.

Denoon, D. 2000. *Getting under the Skin: The Bougainville Copper Agreement and the Creation of the Panguna Mine*. Melbourne: Melbourne University Press.

Department of Minerals and Energy. 1988. *Proposals for a New Mining Act: Discussion Paper*. Konedobu: Department of Minerals and Energy.

Department of Mining. 2003. *Sustainable Development Policy and Sustainability Planning Framework for the Mining Sector in Papua New Guinea: Green Paper*. Port Moresby: Department of Mining.

Derkley, H. 1989. *The Porgera Agreements* (Annotated). Wabag: Enga Provincial Government.

Derkley, H. 1999. Indigenous Communities, Major Mineral Projects and the Law: The Porgera Agreements. Hobart: University of Tasmania (unpublished paper).

Donigi, P. D. 1994. *Indigenous or Aboriginal Rights to Property: A Papua New Guinea Perspective*. Utrecht: International Books.

Duncan, R., S. Chand, B. Graham, T. Lawson and R. Duncan. 1998. *Exchange Rate Policy in Papua New Guinea*. Discussion Paper 64. Port Moresby: Institute of National Affairs.

Extractive Industries Review (EIR). 2003. *Striking a Better Balance: The Final Report of the Extractive Industries Review*. Jakarta: EIR.

Filer, C. 1992. The escalation of disintegration and the reinvention of authority. In *The Bougainville Crisis: 1991 Update*, ed. M. Spriggs and D. Denoon, Monograph 16. Canberra: Australian National University, Department of Political and Social Change.

Filer, C. 1995. Participation, governance and social impact: the planning of the Lihir Gold Mine. In *Mining and Mineral Resource Policy Issues in Asia-Pacific: Prospects for the 21st Century*, ed. D. Denoon, C. Ballard, G. Banks and P. Hancock. Canberra: Australian National University, Division of Pacific and Asian History.

Filer, C. 1997a. Resource rents: distribution and sustainability. In Papua New Guinea: A 20/20 Vision. *Pacific Policy Paper* 20, ed. I. Temu. Canberra: Australian National University, National Centre for Development Studies.

Filer, C. 1997b. West Side Story: the state's and other stakes in the Ok Tedi mine. In *The Ok Tedi Settlement: Issues, Outcomes and Implications*. Pacific Policy Paper 27, ed. G. Banks and C. Ballard. Canberra: Australian National University, National Centre for Development Studies.

Filer, C. 1998. The Melanesian Way of menacing mining industry. In *Modern Papua New Guinea*, ed. L. Zimmer-Tamakoshi. Kirksville: Thomas Jefferson University Press.

Filer, C. 2002. Should mining companies 'break new ground' in Papua New Guinea? *Development Bulletin* 58:115–118.

Filer, C., N. K. Dubash and K. Kalit. 2000. *The Thin Green Line: World Bank Leverage and Forest Policy Reform in Papua New Guinea*. Port Moresby and Canberra: National Research Institute and Australian National University.

Finlayson, M. 2002. *Sustainable Development Policy and Sustainability Planning Framework for the Mining Sector in Papua New Guinea*. Working Paper 2: Benefit Stream Analysis. Port Moresby: PNG Mining Sector Institutional Strengthening Project.

Garnaut, R. 1981. The framework of economic policy-making. In *Policy-Making in a New State: Papua New Guinea 1972–1977*, ed. J. A. Ballard. St. Lucia: University of Queensland Press.

Garnaut, R. and P. Baxter. 1984. *Exchange Rate and Macroeconomic Policy in Independent Papua New Guinea*. Canberra: Australian National University, Development Studies Centre.

Garnaut, R. and A. Clunies-Ross. 1974. Using natural resources to achieve national goals. *Yagl-Ambu* 1(1): 54–65.

Garnaut, R. and A. Clunies-Ross. 1975. Uncertainty, risk aversion and the taxing of natural resource projects. *Economic Journal* 85(2): 272–287.

Garnaut, R. and A. Clunies-Ross. 1983. *Taxation of Mineral Rents*. Oxford: Clarendon Press.

Goodman, R., C. Lepani and D. Morawetz. 1985. *The Economy of Papua New Guinea: An Independent Review*. Pacific Policy Paper 1. Canberra: Australian National University, National Centre for Development Studies.

Gordon, J. 1997. The Ok Tedi lawsuit in retrospect. In *The Ok Tedi Settlement: Issues, Outcomes and Implications*. Pacific Policy Paper 27, ed. G. Banks and C. Ballard. Canberra: Australian National University, National Centre for Development Studies.

Hunt, M. 1989. *Planning for the Future: The Legislative Framework for Mining in Papua New Guinea*. Port Moresby: Paper presented to the Papua New Guinea Law Society Conference on The Exploitation of Resources in the Pacific, 6–8 November 1989.

International Bank for Reconstruction and Development (IBRD). 1965. *The Economic Development of the Territory of Papua and New Guinea*. Baltimore: Johns Hopkins Press.

Jackson, R. T. 1982. *Ok Tedi: The Pot of Gold*. Boroko: Word Publishing and the University of Papua New Guinea.

Jackson, R. T. 2001. *Kekeisi Kekeisi: A Long Term Economic Development Plan for the Misima Gold Mine's Impact Area*.

Jackson, R. T. 2002. *Capacity Building in Papua New Guinea for Community Maintenance During and after Mine Closure*. Working Paper 181. London: Mining, Minerals and Sustainable Development Project.

Jackson, R. T. and G. Banks. 2002. *In Search of the Serpent's Skin: The Story of the Porgera Gold Project*. Port Moresby: Placer Niugini Ltd.

Jackson, R. T., C. A. Emerson and R. L. Welsch. 1980. *The Impact of the Ok Tedi Project*. Konedobu: Department of Minerals and Energy.

Jarrett, F. G. and K. Anderson. 1989. *Growth, Structural Change and Economic Policy in Papua New Guinea: Implications for Agriculture*. Pacific Policy Paper 5. Canberra: Australian National University, National Centre for Development Studies.

Kaputin, J. 1987. Government's official policy on minerals development. *Niugini News* 14 November 1987.

Kaputin, J. 1992. *Crisis in the North Solomons Province: Report of the Special Committee Appointed by the National Executive Council*.

Kirsch, S. 2002. Anthropology and advocacy: a case study of the campaign against the Ok Tedi mine. *Critique of Anthropology* 22:175–200.

Law Reform Commission. 1990. *New Directions in Resource Management for Papua New Guinea*. Occasional Paper 20. Boroko: Law Reform Commission.

Mathrani, S. 2003. *Evaluation of the World Bank Group's Activities in the Extractive Industries: Papua New Guinea Country Case Study*. Washington (DC): Report to World Bank Operations Evaluation Department.

McGavin, P. A., L. T. Jones and B. Y. Imbun. 2001. Long-distance commuting and national human resource development: evidence from Papua New Guinea. *Asia Pacific Journal of Human Resources* 39(2): 98–114.

Millett, J. ed. 1992. *Gas Policy Seminar. Discussion Paper* 53. Port Moresby: Institute of National Affairs.

Mining, Minerals and Sustainable Development Project (MMSD). 2002. *Breaking New Ground: Mining, Minerals, and Sustainable Development*. London: Earthscan.

National Premiers Council. 1988. *Report of the Mining and Petroleum Working Committee*. Port Moresby.

O'Faircheallaigh, C. 1984. *Mining and Development: Foreign-Financed Mines in Australia, Ireland, Papua New Guinea and Zambia*. London and Sydney: Croom Helm.

Papua New Guinea, Independent State of (PNG). 1995. *Government Statement on Gas Policy*. Port Moresby.

Papua New Guinea Chamber of Mines and Petroleum (PNGCMP). 2001. *Industry Concerns with the New Mining and Petroleum Taxation Regime Introduced in the 2001 Budget* (Following the Taxation Review). Port Moresby: PNGCMP.

Papua New Guinea Sustainable Development Program Ltd. (PNGSDPL). 2002. *Annual Report 2002*.

Ryan, P. 1991. *Black Bonanza: A Landslide of Gold*. South Yarra: Hyland House.

Simpson, G. 2002. *Sustainable Development Policy and Sustainability Planning Framework for the Mining Sector in Papua New Guinea*. Working Paper 6: Institutional Analysis. Port Moresby: PNG Mining Sector Institutional Strengthening Project.

Sugden, C. 2002. Managing Papua New Guinea's costly economic cycles. *Pacific Economic Bulletin* 17(2): 1–14.

Taylor, M. and K. Whimp. 1997. *Report on Land Issues and Hydrocarbon Framework Study*. Port Moresby: Fuels and Energy Management Group for Department of Petroleum and Energy.

Tilton, J., J. Millett and R. Ward. 1986. *Mineral and Mining Policy in Papua New Guinea*. Discussion Paper 24. Port Moresby: Institute of National Affairs.

Vail, J. 1995. All that glitters: the Mt. Kare gold rush and its aftermath. In *Papuan Borderlands: Huli, Duna, and Ipili Perspectives on the Papua New Guinea Highlands*, ed. A. Biersack. Ann Arbor: University of Michigan Press.

West, R. 1992. *Development Forum and Benefit Package: A Papua New Guinea Initiative*. Working Paper 16. Port Moresby: Institute of National Affairs.

Wolfers, E. P. 1992. Politics, development and resources: reflections on constructs, conflict, and consultants. In *Resources, Development and Politics in the Pacific Islands*, ed. S. Henningham and R. J. May. Bathurst: Crawford House Press.

World Bank. 1978. *Papua New Guinea: Its Economic Situation and Prospects for Development*. Washington: World Bank.

World Bank. 1999. *Papua New Guinea: Improving Governance and Performance*. Washington: World Bank.

World Bank. 2000a. *Ok Tedi Mining Ltd Mine Waste Management Project: Risk Assessment and Supporting Documents*. Washington: World Bank.

World Bank. 2000b. *Project Appraisal Document on a Proposed Loan in the Amount of US$10 Million Equivalent to the Independent State of Papua New Guinea for a Mining Sector Institutional Strengthening Technical Assistance Project*. Washington: World Bank.

Zorn, J. G. and Bayne P. eds. 1975. *Foreign Investment, International Law and National Development*: Papers Presented at the Seventh Waigani Seminar, April-May 1973. Sydney: Butterworths.

Zorn, S. A. 1973. Bougainville: managing the copper industry. *New Guinea* 7(4): 23–40.

Zorn, S. A. 1977. New developments in Third World mining agreements. *Natural Resources Forum* 1(3): 239–250.

Endnotes

[1] A separate Ministry and Department of Minerals and Energy was established after the election of the second Somare government in 1977. In 1975, the director of the Office of Minerals and Energy reported directly to the prime minister in the latter's capacity as minister for Natural Resources.

[2] It is not reflected in the *Mining Act (Amalgamated)* of 1977 (Chapter 195), which recapitulated a much earlier body of colonial legislation and was not applied to the development of the Bougainville or Ok Tedi projects.

[3] The government's share was estimated to be $A29 million out of a total net profit of $A158.4 million (O'Faircheallaigh 1984).

[4] This was defined as the US prime lending rate plus 4 per cent, which then made 15 per cent (Jackson 1982: 64).

[5] In the case of an ordinary mining lease, the minister is only obliged to consult with the host provincial government, but a wider process of consultation has in practice been undertaken for medium-scale projects, such as Tolukuma and Kainantu, which have been developed under this type of lease.

[6] In effect, the national government would 'carry' the cost of the 49 per cent stake, and later recoup this cost out of the profits of mine production (Banks 2002).

[7] The prime minister tried to sell the package to the Bougainvillean rebels in order to save the Panguna mine from permanent closure, but his offer was declined.

[8] The National Premiers Council had wanted provincial governments and landowners to be parties to these development agreements, but national government officials had resisted this demand (Derkley 1999).

[9] Cabinet had initially rejected the proposal in 1986, but changed its mind when it became apparent that the local community was opposed to the development of a town that would accommodate a lot of 'outsiders' (including other Papua New Guineans) on a semi-permanent basis.

[10] It was later relieved of this power by the Department of National Planning.

[11] That is why the *Mining Act* now includes a clause which says that nothing in the clause vesting mineral rights in the state 'shall be construed as an additional acquisition of property in relation to Section 53 of the Constitution beyond that which prevailed' under colonial mining legislation.

[12] The minister subsequently told parliament that he and his secretary had both been subjected to death threats in connection with the Mount Kare case (*Papua New Guinea Post-Courier* 15, 29 August 1991).

[13] This deal was promptly followed by the leakage of an IMF report which strongly advised the government to abandon its policy of taking equity in major resource projects. This caused the Finance minister, who had commissioned the report, to utter dire threats against the government officials who had leaked it to the press.

[14] Future mineral revenues had already been mortgaged to a Swiss bank in return for a commercial loan – much to the annoyance of the World Bank and the IMF.

[15] This package marked a new stage in the development of the Development Forum because it 'integrated' the compensation agreements between the Lihir Management Company and the lease area landowners with the benefit-sharing agreements between the state, the landowners, and the rest of the local community.

[16] The state's option is to take equity at a price which is proportional to its share of the 'sunk costs' of exploration, which is almost bound to be less than the market price of equity in a project under development.

[17] Orogen did not acquire the state's equity in the Ok Tedi project, because that was no longer held by MRDC.

[18] One of the Papua New Guinean members of this economic fraternity, Charles Lepani, was appointed as Orogen's first managing director.

[19] The Finance minister, Chris Haiveta, told the conference that the package was justified by 'a social and moral need … to lock landowners into a real sense of obligation and ownership of projects on their land to reduce or minimise [the] local content of political risk' (*Papua New Guinea Post-Courier* 27 March 1995).

[20] The Department of Mining has since taken the view that the promise of 'free equity' in large-scale mining projects is only an undertaking on the part of the state to 'free carry' the landowning community's share of exploration costs, which does not mean that landowners are exempt from contributing their share of development costs.

[21] This idea had been around for many years, and could even be seen as a sort of constitutional imperative (Law Reform Commission 1990; Brunton 1994), but its main champions had not been active in the drafting of the new organic law, nor was it clearly articulated in the drafting instructions produced in July 1994.

[22] In their haste to assign all royalties to local landowners, the legal draftsmen also seem to have forgotten that 'royalty grants' from the national government to mineral provinces should have been deducted from derivation grants payable to provincial governments.

[23] Part VII of the act as passed in 1997 allows for the national government to establish 'special purposes authorities' to carry out some of the functions which would otherwise be the responsibility of local-level governments.

[24] There could hardly have been a greater contrast between the amount of publicity generated by the World Bank's role in promoting the process of forest policy reform during the years of the Chan government (Filer *et al*. 2000) and the complete absence of public debate about its parallel role in the petroleum sector.

[25] The word 'benefit' is meant to avoid the implication that landowners have an entitlement to royalties or project equity through their claim to customary ownership of subterranean resources.

[26] This body is meant to ensure that the disbursement of all grants (in cash or in kind) made by the national government to provincial or local-level governments, the spending of all funds held in trust for them by a subsidiary of MRDC, and any expenditures by the developer under the Tax Credit Scheme are made 'in accordance with development plans submitted by the relevant Local-level Government or Provincial Government'. Four years after the passage of the act, the Department of Petroleum and Energy was still engaged in the production of guidelines for the operation of such bodies, so none had yet been established.

[27] The Bank argued that since the holdings in the Fund were matched by domestic debt in the form of treasury bills, its abolition would have no monetary consequences provided an equivalent amount of government securities was redeemed. Instead, it recommended that the Bank of Papua New Guinea should manage stabilization issues through the domestic debt market, by tightening monetary policy to safeguard reserves.

[28] The second of these promises was given legal effect with the simultaneous passage of the *Resource Contracts Fiscal Stabilisation Act* (2000).

[29] One of these last three people, who was also appointed as chairman of the board, was Professor Ross Garnaut, the main architect of the original resource rent tax. Professor Garnaut has also been the chairman of Lihir Gold Ltd since that company was established in 1995.

[30] This loan was complemented by a grant of 50 million euros from the European Union under the so-called 'Sysmin' facility, which was partly conditional on the implementation of a proposal to transform the Department of Mining into a Mineral Resources Authority that would be directly funded through a share of the government's mineral revenues. Part of the loan from the World Bank has been used to fund the design of this new entity, but officials in the central government agencies have so far refused to condone its creation.

[31] The principal author of this paper was also a member of the team.