Balancing Needs, Claims and Demands; setting the agenda and ensuring resource projects contribute and don't undermine sustainable development objectives and priorities

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series of slides to show the contribution of natural resource production to PNG's GDP, exports and revenue, now and into the future, and the economic, social -including institutional- challenges facing the country and its government in converting natural resource wealth into constructive opportunities and sustainable development

Surely, it goes without saying that everyone and every government would want a gold mine, oil field or other natural resource wealth? Surely, these will fix a country's or province's fiscal needs and ensure future funding for infrastructure and services, as was envisaged by the Australian Govt back in the early 70s, with respect to a major copper mine being established in Bougainville to cater for PNG's impending needs as an Independent nation.

Many hard lessons have been learnt since then about the mixed blessings of such massive enclave projects, and yet, despite the problematic experience of PNG's boom and bust in the 1990s, there remains an almost blind pursuit by some governments and individuals, over grand projects, usually in extractive industries, providing the panacea for national and local needs and ills; a recent PNG Govt was indeed pushing for a major resource project for each province, purportedly to drive the local economy.

Although ownership of minerals, as opposed to land or forest resources, is vested with the State in PNG (and most other countries), a system of joint, or parallel control, if not actual ownership, has come into effect in practice, particularly since the closure of the Bougainville mine in 1989; the Bougainville experience forced a rethink, and the introduction of greater consultation prior to any mine development, notably through the 'development forum' process. Expectations have invariably been raised, and with them land ownership claims over prospective resources, or sometimes innovative or unscrupulous mechanisms to by-pass due process (as with so-called 'Waigani landowners' scheming behind doors with some officials to gain land title, or, for example, manipulation of ILGs to gain control of oil revenue, or compensation claims by bogus claimants, sometimes sidelining genuine claims).

The reality, as has been increasingly recognised around the world, is that major resource projects can provide valuable benefits, even provide the needed kick-start, notably through constructive investment, but it's not a given, and depends on a number of factors, related to the capacity of the economy to absorb the projects, the calibre of governance and effectiveness of the State and other players to set a suitable investment environment, and to plan and utilise major revenue flows effectively. So individual projects, or a level of extractive industry may be invaluable in providing essential revenue for the State, whilst too many projects, too much or too rapid an influx, may tip the balance and prove counter-productive.

Major extractive projects will invariably cause social and environmental consequences, including shifts in economic conditions and opportunities (positively but also negatively), but if not managed carefully they can generate serious disparities of income and opportunity between and within different communities and households. The reality is that extractive industries are basically enclave activities, especially in developing countries, providing limited opportunities for value adding and relatively few jobs; this applies particularly to oil and gas, with the US$19 billion PNG LNG project, for example, shrinking from a peak workforce of some 16,000 (half PNGeans) in mid-2012 to a mere 600 of so (many comprising security guards) after the construction phase.

Yet the real priority for most developing countries, like PNG with its 7 million+ population, half of whom are under 21, is to generate employment and broad-based and sustainable income earning opportunities. Mines have very different life spans, with some particularly, providing valuable longer term employment and transferable skills (to other projects in-country or overseas, or to other industries), with some mining companies showing a markedly greater inclination and capacity to recruit and develop their local labour force. However, with their limited integration in the wider economy, the main benefit to the country from the extractive industries remains the provision of revenue at the national and sub-national levels to provide the basis for broader-based economic and empowerment generation of the community, through physical and human resource investment. Hence the quality of public institutions will critically determine the outcome and potential from extractive industry development. If government exists as another enclave, largely self-serving and failing to perform its core functions effectively, then the main opportunities from the extractive industries will be largely foregone.

Whilst owning a mineral resource is one thing, not so many want a major extractive project on their own doorstep, whether a mine or an overseas-run logging project (often treated as an extractive industry. Maybe a mine out in that great desert beyond is OK (unless you're a Mongolian herder), or a relatively unobtrusive oil or gas well, but not a mine on your own productive garden land or near your own water supply, if you plan to continue living there, and it's especially unwanted by those most directly affected, notably the resident women impacted by a potentially polluted water supply or disruption of garden land. So to proceed with such projects there have to be clear national and local benefits, and standards and impact mitigation.

Over the years there's been a growing literature on the negative implications of major resource projects, under the titles of 'resource curse' and 'Dutch disease', highlighting how, unless managed well (which is a challenge), such major projects can stall development prospects or at least provide a major shock, such as severely undermining overall employment.

Observers were surprised to find that many of the countries with the least natural resources demonstrated some of the strongest economic performance in the longer term (from Japan to Singapore and Finland), utilising their human capital and investment in HRD, whilst many of the resource rich economies, enjoyed short bursts of revenue and growth from extractive industries, as with PNG in the 1990s, followed by bust or a period of relative stagnation, with others better able to capitalise on the use of these resources.

Indeed, with PNG, even after a decade of positive and sometimes strong economic growth, the country has not addressed its paradox of having amongst the worst socio-economic indicators (like atrocious maternal and child mortality rates) in the Asia-Pacific region, alongside several world class resourse projects. Income inequality has grown and overall competitiveness, particularly affecting traditional industries, which provide the bulk of employment and broad-based income-earning potential, have been jeopardised. Interestingly, some of the resource richest provinces within PNG have, likewise, experienced amongst the worst services (with a specialty in false invoices), whilst some poorer provinces, that have had to be markedly more frugal, have performed better. (Recent increased resource allocations, notably in the 2012 and 2013 Budgets, for priorities, such as free education, and to sub-national levels of govt are designed to start addressing the deficiencies, but it will take strengthened capacity, systems, oversight and accountability at all levels for this to achieve the desired, or stated, outcomes).

For some countries, particularly with more advanced economies, the so-called Dutch disease could entail a lasting but manageable adjustment in the composition of that economy, whereas for many, particularly developing countries, such as in much of West Africa, the related currency appreciation, and often associated fuelling of corruption, increased individual and regional income disparities, has devastated much of the economy, encouraged conflict and jeopardised service delivery and standards. (see graphs, from several W African countries on the loss of other industries with growth of a new boom sector).

For a developing country, such as PNG, although mining and hydrocarbon industries are major contributors to revenue, exports and substantial (direct and indirect) formal sector employers, they only provide a small portion of total employment and income earning opportunities, as against particularly agriculture, for now and the foreseeable future, if the latter is safeguarded. And it is critical that these other industries are kept viable and competitive, notably agriculture in PNG and Solomons, but also tourism, fisheries and services across the Pacific and manufacturing in a few countries. In most cases, safeguarding the natural resources will remain critical for sustainable income earning and welfare across the Pacific, and extractive industries must not jeopardise that requirement.

Expectations from prospective extractive industries are often astronomical, at least initially, fuelling the belief that fiscal and other problems will all be simply dissolved; this belief, amongst both some in government and some landowners, results in loss of fiscal focus and often loose borrowing, or mortgaging against future earnings, often for relatively frivolous, wasteful or white elephant expenditure. New projects are often prioritised over more critical recurrent expenditure on maintenance, restoration and upgrades. Treasury forecasts in PNG, for example, from LNG have been trimmed well back, showing LNG revenue (from late 2014) initially only replacing lost revenue from other sources, notably aging extractive projects. Yet, the government has set a Budget for 2013 and beyond, entailing heavy borrowing, with substantially increased expenditure, but very limited extra capacity strengthening or oversight to ensure effective implementation.

Some countries in the Arabian peninsula can perhaps afford to live as rentiers, employing foreigners from around the world to provide the core workforce, whilst the country invests internationally to provide income for a future era when oil resources are depleted. Their oil is relatively cheap to extract. In the Pacific region most hydrocarbon and other mineral resources (including submarine at this stage) are very costly to explore and extract, far in excess of the current capacity of local capital markets. Invariably, when projects commence there is a major debt to service before substantial local is gained, notably from corporate tax, whilst the majority of proceeds will flow, at least initially, to overseas shareholders. Some projects and their proceeds, such as Misima, are also relatively short-lived, with few long term benefits. Current reports of young men from the gas producing parts of PNG (around Tari) deciding to forego education and just enjoy available jobs or proceeds from LNG should be of great concern, as clearly proceeds will be limited both in duration and extent, and the major benefit from such resource project should be though investment in human capacity development and broadening skills and opportunities, not in selected beneficiaries simply consuming the proceeds, as has occurred in many of PNG's resource projects hitherto.

The Pacific has a love affair with ownership, but, whilst the Pacific pension and other local funds should be facilitated to access lower risk equity in resource projects, governments, which can access revenue through more direct mechanisms, unavailable to other investors, should carefully consider whether diverting funds from core government functions into equity investment, especially in riskier new projects/technologies, is a suitable use of public funds, at a time when the former (roads, law and order, schools and health services and standards) remain substantially inadequate.

For the foreseeable future, even with growing urbanisation, as in the UNDP's draft Post-MDG/2015 survey and the recent PNG gender survey (WB/INA), the primary concerns of the majority relate to a safe (crime free) living and working environment, access to land and clean water, and other requirements for longer term livelihood and health, as well as access to quality education, practical skills and other priority services, largely geared to empowerment.

In PNG, in any case, there has been an longstanding tussle over ownership, level of control, or at least proceeds from extractive projects between the State, sub-national governments and landowners, with arguments by some, that the ownership should be vested with the customary landowners, as are the land and forest resources (although in practice over the years that's not resulted in the landowners, at least except a few, gaining much benefit or even control over their forest resources, with, latterly, officials making discretionary decisions over vast areas of customary land, under often notorious SABLs, without the customary owners' approval).

Within resource areas, even small islands, such as Lihir, there are resource owners and non-resource owners, beneficiaries and non-beneficiaries, and those more heavily affected (not just those owning the land where the mine is, but also those downstream, for example, and those benefitting from or losing out from inflation in prices, for example. Women, who undertake a disproportionate level of the water collecting, subsistence agriculture and basic family support tasks, are invariably more affected by the negative effects of extractive industries, and invariably, even in matrilineal societies, have been relatively marginalised from the consultations and distribution of benefits, at least until the Ok Tedi mine extension negotiations, after which a minimum 10% was explicitly earmarked for women and children, and probably set a benchmark for other projects, albeit considered inadequate by many observers.

Apart from the direct payments to landowners and landowning communities for use of, or compensation for loss of land, crops etc. for extractive projects and associated access facilities,, including royalties, Landowner companies are a major means for achieving wider local employment, skills and income-earning benefits. However, unless well managed and able to expand and diversify beyond being simply a local contractor, (as seems to have been achieved by a few companies like, Anitua in Lihir, IPI, and potentially TWW), these are largely unsustainable, and in effect just a means for transfers and temporary community engagement.

The State is clearly bound (notably in PNG's Constitution) to provide extensive public goods and services equitably to the population across the country, including in remote locations, regardless of whether landowners of mines or affected by a mine or not, and clearly loss of control by the national or even sub-national government would weaken their capacity for such redistribution. Even without any further shift in favour of landowner control, a major disparity has already developed between resource rich provinces and those without major projects, despite efforts led by NEF to reduce these disparities, or at least raise the provincial allocations towards the minimum required for basic service provision.

On the other hand, there is some evidence from PNG (Bourke et al) that, whilst poverty is closely linked to remoteness (and lack of opportunity – Gibson et al), the second most poverty affected communities tend to be those in the vicinity of major extractive resource projects (including logging), partly because of the inequitable distribution of costs and benefits. With ineffective service delivery of public goods by the National, but particularly sub-national governments, notably in some of these rich provinces, the companies often become major local de-facto service providers, albeit partly using tax credits. However, this often results in greater internal disparities within provinces, between wealthier and forgotten outposts, but there's often also a major mismatch and poor coordination, for example between provision of facilities and staffing and support, e.g. with houses or classrooms built, but perhaps with no teachers or other staff (or supplies) ever provided. In the remoter areas most services, including critical transport links, notably air services, are provided by churches, although effective church/ngo-government partnerships have been developed, especially in some provinces.

Extractive industries have a long history in PNG (and a few other parts of the Pacific, like Kiribati and Nauru), and if governments are prepared to learn from these lessons, and from further afield, there are many to be gained from PNG and global experience, even if one country or scenario is never identical to another. Extraction certainly comes with various problems, and no one would want to pock mark their landscape or jeopardise their watersheds with multiple mines, nor to further burden an already over-heated economy, or to grant excessive concessions to entice an investment where the net benefits in jobs, revenue or other grounds are marginal or even negative. A country needs each extractive project to be able to demonstrate its clear net benefits at a national, sub-national and local level; the operator to have the capacity to plan and manage the project to global standards, including later mine restoration, without special concessions, and for the authorities to be able to oversee the operations and standards impartially, and ensure fair benefits are negotiated and administered.

There's a big range in the commitment of different industry participants, in their skills, capacity to negotiate, but also readiness to work as team players in the host country. But most recognise that they operate at the courtesy of local landowners, and are eager that they obtain last tangible benefits. Industry itself, is therefore extremely concerned when Govt is the weak link failing to fulfil its community obligations, and some companies particularly go out of their way to provide community support, or initiated, for example the concept of the tax credit scheme to use their own capacity on the ground; Some have learnt lessons the hard way, and some are oil/mining (and other major, e.g. agricultural companies) are even observed also as local and even nationwide health care providers.

Extractive industries can provide considerable opportunities, as with development assistance, for investment in core infrastructure and human resource development, to enable poverty alleviation and leapfrog capital constraints, if managed prudently, but can also have fairly devastating on the economy and natural environment, or at least major wasted opportunities if not planned and managed prudently. As with development assistance there needs to be the core domestic capacity and commitment to effectively utilise and absorb the investment or support, as FDI in shorter term extractive or development assistance projects, cannot equate with more organic capacity building and sustainable business and economic development.

The message is that the extractive industries across PNG and the Pacific may provide a major portion of revenue and export earnings in some countries, but with most of these resources short-lived and relatively costly to extract, it is critical that governments:

- Learn lessons from their own past in setting investment conditions and managing extractive industries (including from failures from other industries, such as forestry), as well as from neighbouring countries or further afield, perhaps with greater experience in this field;
- Ensure cost benefit and social and environmental impact assessments contribute to government's approval process, including whether an extractive project should even proceed, be modified, deferred (on various grounds) or even rejected (e.g. as providing no net benefits to PNG/locally, or being located in a valuable protected area, etc.) The process should neither be used as a rubber stamp, nor be a cheap replica of other plans (as has widely occurred in PNG) but entail detailed data collection, including public consultation;
- Recognise that, while companies may seek to choose their timing to develop mining projects, from a nations viewpoint, it is often preferable to sequence them to gain fuller

and sustained benefit (and avoid exacerbating Dutch disease and killing off other sectors), including utilisation of local labour force etc. Some projects may be developed to fit specific market niches, like PNG LNG, but generally mineral resources maintain their value or appreciate over time, and may often be better retained in the ground. Continued storage underground may also safeguard the resource and its proceeds better than located in various financial institutions and trust funds (held by Govt, landowner companies etc), or until technology improves etc…

- Put strong governance (including accountability) frameworks set in place, preferably well in advance of major mining production and revenue; that applies also at the sub-national level and with landowner entities. This is a major lesson from successful developing countries, like Botswana, as well as developed nations;
- Have mechanisms in place to iron-out major fluctuations in revenue, (notably a sovereign wealth fund(s))both to ensure that priority expenditure is sustained during economic downturns and to address major increases which cannot be readily absorbed in the economy without major disruptive effects (i.e. Dutch disease) on other industries, including from currency appreciation;
- Manage the Sovereign Wealth Fund to the highest international standards of transparency and accountability (notably under the Santiago principles), and that, particularly with any major spikes in revenue, that is sanitised and invested substantially offshore to mitigate currency appreciation. The SWF requires wide public awareness and sense of public ownership and regular reporting (particularly where expenditure is to be deferred) and, for a developing country, that there's a suitable balance between responding to current physical and human investment needs and sanitisation (to safeguard competitiveness and other domestic industries) and meet future needs;
- Invests the proceeds from extractive industries, particularly in priority infrastructure – notably maintenance (rather than new projects), HRD, law and order, to provide the majority with ready access to markets and services, to empower them, through use of their own skills, labour and often land, to achieve a satisfactory livelihood;
- Ensure adequate support for professional and accountable law, order and justice services, as sound law and order is a prerequisite to business and investment, and, along with the provision of infrastructure and land, air sea transport services, are critical to provision of local commerce/agriculture, schools, health and other services. In essence they're mutually interdependent, with law and order depending partly upon the availability of employment, and vice versa. Letting systems and capacity run down, and failing to keep apace with population growth, as has been the case in PNG, requires a combined restoration of management capacity and standards, provision of adequate qualified teachers to steadily build up capacity and professional output, especially where almost 50% of school aged children have had no access even to basic education);

- Coordinate government efforts, entails a combination of bottom up (e.g. ward) planning, to engage community inputs, with coordination to ensure systematic and reasonably consistent provision of core infrastructure and service provision, including effective partnerships with the churches, private sector and NGOs, which deliver public services more efficiently
- Restore/build up necessary govt capacity to provide the necessary preparation and regulatory functions over proposed oil/mining projects, to ensure proper landowners and claimants are identified, ensure effective management and standards and minimise waste on duplication of institutions, jobs etc, and establish/restore mechanisms of accountability; generally don't borrow heavily against future expected revenue, which may not materialise, especially if implementation capacity and mechanisms are not yet in place;
- Facilitate effective arrangements to improve viability of other sustainable industries, reducing their costs of operation; including temp freight subsidies etc re. Fly river etc
- Are objective over project approvals and conditions (not approving projects where social/economic/environmental costs seemingly outweigh longer term gain), including sequencing, so that multiple major projects do not occur simultaneously when there's already overheating of the economy, a shortfall of available local skills, port and related capacity, and absorptive capacity for the output/proceeds,
- Negotiate project agreements carefully through a transparent process, ensuring clear benefits for the State, sub-national and landowners, endeavouring to provide a consistent (i.e. level) playing field for investors, avoiding tax holidays (or illegal employment arrangements) and other special concessions, and apply EITI principles for transparent management of subsequent proceeds;
- Ensure preliminary mine closure plans are in place from the start of mine life, and remedial action proceeds throughout mine life and that the State holds an adequate performance bond, but is ready to approve arrangements for environmental offsets, where suitable;
- Ensure rigorous genealogical studies prior to development forums and project negotiations, and ensure that, where compensation (for loss of land, amenities, water quality, etc.) is to be paid, it only goes to verified genuine claimants; ensure reliable demographic data is maintained for the project area, (but also restored and maintained for the whole country);
- Balance the needs and provision of services to resource landowning households, provinces and districts, with those of the rest of the country, including disadvantaged areas (as required by PNG's Constitution);
- Ensure special consideration of the needs of women/children and other main affected or disadvantaged groups (as per Ok Tedi mine continuation renegotiations), ensuring

their participation in consultations and negotiations, and explicit financial and other support, especially in the case of amenity loss, (with the 10% minimum negotiated for women and children, as negotiated over Ok Tedi) applied as the bottom line;

- Invest, in partnership with industry, in industry-specific and adaptable skills, to readily meet the needs of the extractive industries, without the constant need for large numbers of overseas manpower, training for diversification into non-mining industries, including prior to end of mine life;
- Minimise pointless delays and other costs to companies, notably over compliant projects; Creating a better investment environment and reduced unnecessary delays and red tape, could enhance leverage and readiness by companies to pay greater tax rates to the State, particularly where, in turn, the State actually delivers the infrastructure and other public goods it has agreed to, or which are more standard internationally;
- Consults, considers and debates the issue of the State taking up project equity, particularly in the case of riskier or untested projects and technologies (such as deep marine mining at this stage); there are strong arguments for greater national equity in the extractive resource sector, but with private funds naturally drawn to the boom sector (including associated real estate), there is a strong case for public funds to be retained for needed public goods (which are in short supply in PNG), and support for, and perhaps investment to support the non-boom sectors, like agriculture, manufacturing, tourism and other services, sustainable forestry and fisheries and well-judged downstream processing, geared to broader-based employment generation and sustainable development. (others would argue for the government to stick to fiscal measures, and avoid the unnecessary risks associated with equity –except where associated with stabilisation etc. through mechanisms such as the SWF, with upfront costs and ambiguity over State responsibility; (PNG has been blowing hot and cold over equity, establishing and offloading companies, e.g. Orogen established in the early 1990s and privatised into OSL, with the State retaining equity in OSL, and then Petromin and PNG Petroleum Company were established in the mid-2000s, and latterly seem to being replaced again, with the State's equity in OSL also mortgaged for its equity in PNG LNG).
- Assist landowners, together with the mining/oil companies, in developing suitable skills and models to manage accountable landowner companies, learning from successful models and experiences elsewhere within the country or internationally.
- Explore ways to gain greater value added from mineral resources, including to supply local needs, such as for energy and associated dependent industries, but also to generate greater local employment and benefits prior to export, noting that over

generations, it has often been the middleman who has shared a disproportionate share of the benefits from extractive and other primary industries.

- Take an active role in safeguarding the prospects and viability of their 'non-boom' sectors, such as agriculture (e.g. PNG and elsewhere), tourism, fisheries, manufacturing, which may in different countries have the main role in providing employment and broad-based household income, not through an protectionist measures, but through active support for research and development (including and enhanced planting material and stock), and providing effective mechanisms to reduce local costs (from prevailing poor infrastructure, lack of competitive transport and other services and utilities) and to improve access to markets and supply chain and tangible value-adding, including air-land and sea freight subsidies, especially to remoter areas, as both an economic and welfare measure, as continued shipment of marketed products, enables vessels to continue operating, and other services, personnel and supplies to be transported in and goods, staff, students and patients to travel out.

As stated, an economy at both the national and local level is an organic process. Remove a key ingredient and it loses momentum and starts to unwind, whilst progressively reinforcing capacity and plugging apparent gaps can reinforce and build up that economy and society. The extractive industries have the capacity to severely undermine, (excuse the pun), but also contribute to the wider economy, if not given free reign, but if their development is planned and projects skilfully negotiated for PNG's longer term benefit (rather than short term expediency or corporate interests exclusively) and proceeds channelled into well-managed priorities, but also, where necessary, sanitised from imposing undue economic disruption.

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