NATURAL RESOURCE REVENUE MANAGEMENT IN LOW- AND MIDDLE-INCOME COUNTRIES EXPERIENCING POLITICALLY FRAGILE CONDITIONS

A SYSTEMATIC REVIEW

CONTEXTUALISATION OF REVIEW FINDINGS FOR AFGHANISTAN AND MYANMAR [JANUARY 2018]

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LIST OF ABBREVIATIONS

DFID	Department for International Development
EPPI-Centre	Evidence for Policy and Practice Information and Coordinating Centre
GDP	Gross Domestic Product
GIRoA	Government of the Islamic Republic of Afghanistan
HIC	High Income Country
LIC	Low Income Country
LMIC	Lower Middle Income Country
NGO	Non-Governmental Organization
NLD	National League for Democracy
NRF	Natural Resource Fund
NRR	Natural resource revenue
NRGI	Natural Resources Governance Institute
NRRM	Natural Resource Revenue Management
PwC	Price Waterhouse Cooper
RWI	Resource Watch Institute
SOFAZ	State Oil Fund of Azerbaijan
TERI	The Energy and Resources Institute

BACKGROUND

The discovery of mineral resources does not always lead to positive social and economic outcomes as citizens and policy makers may expect. In fact, literature on resource-rich countries discusses a 'resource curse', which refers to negative impacts of high levels of resource endowments on economic growth and democratic processes.

For example, resource rich countries are shown to experience 'Dutch Disease', which is a phenomenon that occurs when resource exports grow rapidly leading to a rise or appreciation in the exporting country's exchange rate (Auty 1993, 2001, Sachs and Warner 1995, Sala-i-Martin and Subramanian 2003, Smith 2004, Kaldor et al. 2007). As a result, of the high value of the exporting country's currency, other exports become uncompetitive internationally. In addition, with the exchange of foreign currency to local currency, there is a general rise in money supply and domestic prices. This increase in the 'real exchange rate' refers to a phenomenon wherein one unit of foreign currency buys less goods and services in the exporting country, causing it to become less price competitive.

The presence of natural resources is also seen to contribute to conflicts, including civil wars, especially in countries with low institutional capacity, as various groups fight for control of the resources (Collier and Hoeffler 1998, Ross 2011).

To avoid this 'paradox of plenty' and manage revenues from natural resources effectively, governments may use a range of policies and interventions collectively referred to as natural resource revenue management (NRRM). This may include interventions to maximize the government's share of the natural resource revenue (NRR); to optimize allocation of NRR; and to ensure transparency and accountability in the management and sharing of NRR with sub-national levels and citizens.

For instance, governments use a variety of fiscal instruments such as royalties, profit taxes, revenue- or volume-based fees or taxes, production sharing, explicit rent-capture mechanisms, bonuses, equity participation, and competitive tenders to generate revenues from natural resources. NRRM also includes designing policies to optimize the allocation of NRR to promote inclusive growth, sustainable development, private sector growth and intergenerational equity. Finally, building accountability and transparency in managing natural resources and revenues from these resources is also an integral part of NRRM.

The effective management of NRR is particularly challenging for 'fragile' and conflict-affected states, that is, states which may have experienced prolonged conflict, in addition to low institutional capacity manifested in elevated levels of corruption or limited transparency and accountability.[1] It thus becomes important for these countries to consider their country-specific challenges when designing and implementing policies for utilizing NRR.

In this context, this systematic review sought to examine the effectiveness of interventions made by governments to manage natural resources, specifically mineral resources such as coal and petroleum through a study of the existing literature on this issue and outline policy options for low- and middle-

[1] More information on the classification of states as fragile for the purpose of this review can be found in the technical report. (Ghose J, Bakshi SK, Arora N, Sharma R, Deepa N, Govindan M (2016) *Managing mineral wealth through natural resource funds: A systematic review*)

income countries (LMICs) experiencing fragile conditions. The review was carried out in two stages. In the first stage, we examined interventions for NRRM more broadly, including interventions related to generation, allocation, and transparency and accountability. Based on a mapping of the studies, in the second stage of the review, the focus was narrowed to natural resource funds (NRFs) as an intervention to manage NRR. An NRF is a type of a sovereign wealth fund, and is a government-owned special-purpose investment vehicle whose principal source of financing is revenue from mineral resources such as petroleum, natural gas and coal.

A configurative synthesis was conducted on 41 studies selected in Stage II of the review to answer the following three in-depth review questions:

- How can NRFs be used to manage resource revenue by resource-rich countries experiencing fragile circumstances?
- What has been the effect of existing NRFs used to manage natural resource revenue?
- How can NRFs be made more effective, including the institutional support required and revenue-sharing arrangements between national and sub-national levels of government?

Contextualization of findings was done for two South Asian countries, Afghanistan and Myanmar, both of which are classified as 'highly fragile' states by DFID.[2] Since there is limited literature on natural resource revenue management specifically pertaining to these two countries, we attempted to use findings from other countries and apply them to the political, economic and social contexts of Afghanistan and Myanmar to understand whether NRFs could operate effectively in these countries and the possible challenges which might arise in the management of these funds.

[2] http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/international-development-committee/dfids-allocation-of-resources/written/28276.pdf (accessed 21 December 2017)

AFGHANISTAN

KEY MINERAL RESOURCES AND THEIR REGULATION

Afghanistan has large deposits of minerals, such as iron ore, copper, cobalt, gold, lithium, niobium, uranium, chromite, graphite and marble. It is reported to have 2,400 million tonnes of iron ore reserves and 57 million tonnes of copper reserves, some of the highest in the world (Hall n.d.). In 2010, the US Geological Survey estimated in 2010 that the country's geological resources may be approximate $908 billion, based on remote sensing surveys from 2005 to 2009.

Table 1 presents an overview of the key mineral deposits in the country.

Table 1: Reserves of key mineral resources in Afghanistan (2011)

Commodity	Resources
Copper	57.8 mt[1]
Iron Ore	2438 mt
Gold	2698 kg[2]
Barite	151.5 mt
Bauxite	4.5 mt
Rare Earth Elements	4.88 mt
Oil and Natural Gas Liquids	1596 mmbbls[3]
Natural Gas	15.7 Tcf[4]

Sources: Ministry of Mines and Petroleum, Government of Islamic Republic of Afghanistan (2011): Available at http://mom.gov.af/Content/files/Afghan%20Presentation%20-%20Sg%20Conf_Consolidated%20v1.pdf; (accessed on 7 December 2017)

Notes: mt: million tonnes, kg: kilograms, mmbbls: million barrels, tcf: trillion cubic feet

These resources have remained largely undeveloped due to security concerns and lack of infrastructure needed for mineral development, such as power, mining, mineral processing facilities and roads (Renaud 2015). As of 2015, mineral rents contributed less than 1 per cent to the GDP of the country, growing from 0 per cent in 2012 to 0.008 per cent in 2015.[3]

However, if developed appropriately, the resources provide an opportunity for the country to grow economically and improve the quality of life of its citizens. The Ministry of Mines and Petroleum (MoMP) estimates that mineral resources may contribute 42–45% to Afghanistan's GDP by 2024 (Jackson (2012)). It is expected that the development of the minerals sector to generate jobs, reduce dependence on international aid, and help the economy both diversify and grow (Brown and Blankenship (2013)).

INSTITUTIONS, LAWS, AND POLICIES REGULATING THE MINERALS SECTOR

The MoMP is responsible for the regulation of the mineral sector, including exploration and extraction. The Ministry of Finance collects taxes and revenues from the sector. Major laws which

[3]World Bank: http://data.worldbank.org/indicator/NY.GDP.MINR.RT.ZS?locations=AF&page=1 (accessed 29 November 2017).

govern the mineral resources to achieve these objectives include the Hydrocarbons Law 2009 and the Minerals Law 2014. In addition, the Hydrocarbons Regulations 2009 and the Mining Regulations 2010 outline rules relating to bidding, exploration, exploitation, royalties and fees, and the environmental and social safeguards to be provided.[4]

Policies which govern the minerals sectors in the country include the National Mining Policy, National Coal Policy (2011), Industrial Mineral Policy (2012), Metals Mining Policy (2012), Rare Earth Elements and Metals Policy (2012), Radioactive Minerals Mining Policy (2012), CNG Policy (2012), Artisanal and Small Scale Mining Policy (2012), Construction Mineral Policy (2012), Dimension Stone Policy (2012), among others relating to social policies, environmental protection and occupational health and safety.[5]

In 2013, Afghanistan became of a member of the EITI, which mandates that companies publish what they pay, and the government discloses the revenue it receives and the two numbers are being reconciled by an independent administrator.[6]

However, as pointed out by Natural Resources Governance Institute in its 2013 Resource Governance Index (RGI), while Afghanistan has comprehensive mining legislation, there are serious challenges to effective mineral governance in the form of lack of government data on the mining sector, limited oversight of licensing processes and state owned companies, high levels of corruption, and limited application of rule of law.[7] For example, according to the 2013 RGI, while the law requires that environmental and social assessments be made before starting mining operations, no such assessments had been completed or released as of 2013. In addition, while rules bar government officials from receiving mineral licences, there have been allegations of contracts being awarded to family members of government officials.[8] The country ranks a low 169 out of 176 on Transparency International's Corruption Perceptions Index 2016.[9]

One of the requirements of the Minerals Law 2014 is that the Ministry of Finance should allocate 5 per cent of the revenue from a mine to a special budget code or a wealth fund for the economic, social and environmental development of mining regions. This is in addition to its annual national budget allocation.[10] The National Mining Policy (2011-12) also states that the government is in the process of creating a wealth fund: 'The Fund will allocate revenues through public financial management system for infrastructure development, education (including higher education and vocational training), health, community development, and will also provide a measure for fiscal

[4]http://mom.gov.af/Content/files/Afghanistan-%20Minerals%20Law-19-May-2015%20English.pdf, http://mom.gov.af/Content/files/Hydrocarbons_Law_2009-(Unofficial_English_Translation_dated_March_2014)-Final.pdf, http://mom.gov.af/Content/files/Mining_Regulations.pdf, http://mom.gov.af/Content/files/Hydrocarbons_Regulations_2009-(Unofficial_English_Translation_dated-April-13_2014).pdf (all accessed 29 November 2017).

[5]Ministry of Mines: http://mom.gov.af/en/page/3993/7664 (accessed 29 November 2017).

[6]http://aeiti.af/en/page/eiti-profile/what-is-eiti. (accessed 29 November 2017). The country is yet to be assessed against the 2016 EITI Standard.

[7]http://www.resourcegovernance.org/sites/default/files/country_pdfs/afghanistanRGI2013.pdf (accessed 29 November 2017).

[8]Ibid.

[9]http://www.transparency.org/news/feature/corruption_perceptions_index_2016 (accessed 29 November 2017).

[10] http://mom.gov.af/Content/files/Afghanistan-%20Minerals%20Law-19-May-2015%20English.pdf (accessed 29 November 2017).

stabilization due to economic shocks such as commodity price changes.'[11] Therefore, while there seems to be some interest in the creation of a wealth fund, no such fund has been created till date.

CONTEXTUALIZATION OF THE REVIEW FINDINGS

In this section, we attempt to contextualize the findings of the review to Afghanistan. We discuss firstly, whether an NRF ought to be established in the country; secondly, if yes, then the appropriate institutional structure for the NRF; and finally, what the spending priorities of the NRF ought to be, given the high requirement for domestic investment on account of local discontent, a lower standard of living, low access to public services, poor infrastructure and high unemployment, unlike several other countries which have established NRFs.

We argue that an NRF ought to be established in Afghanistan, but only if certain conditions are established to ensure that it is able to function effectively. These include well-functioning public finance institutions with appropriate accountability and transparency mechanisms, established and stable fiscal rules, clearly defined rules for investment, decision-making bodies for the funds with adequate representation by experts in wealth management, and independent oversight of the fund. In addition, if an NRF is created, the government must create fiscal rules to both address immediate developmental needs, which will require spending, especially on sub-national regions where resources are extracted, as well as concerns relating to intergenerational equity, which will require saving.

NRFs may be established to: delink expenditures from volatile resource revenue; promote intergenerational equity; reduce dependence on mineral revenues and prevent de-industrialization of non-mineral sectors (what is often termed 'Dutch Disease') through diversifying the economy by channelling funds towards non-mineral sectors such as agriculture or manufacturing; and allow countries hold capital abroad till domestic absorptive capacity increases or enable higher returns on investments than domestic investments allow.

Countries such as Norway, Chile and Botswana are cited as examples of countries where NRFs have contributed to effective revenue management through meeting some of the objectives stated above. However, as the experience of countries such as Azerbaijan, Kazakhstan, Oman, Libya, Russia, Angola, Nigeria, Trinidad and Tobago and Venezuela shows, NRFs are not always successful in meeting these goals.

We discuss the experiences of other countries, outlined in other parts of the report, to detail these conditions for Afghanistan.

Objectives: The government must first define the objectives for which the fund is to be established, as this will determine its institutional and fiscal structure. As mentioned above, objectives may include saving resource revenue for future generations, fiscal stabilization and consequently smoothing of expenditures, diversifying economies and planning for sustained development once resources are exhausted.

The National Mining Policy indicates that the objectives of establishing an NRF would be to: fund infrastructure development; achieve socioeconomic objectives relating to health, education and community development; and promote fiscal stabilization. In addition, the Minerals Law 2014 states

[11]National Mining Policy, http://www.mom.gov.af/Content/files/Policies/English/English_National_Mining_Policy.pdf (p. 5) (accessed 29 November 2017).

that the objective of the NRF would be to promote the economic, social and environmental development of communities affected by mining.

This indicates that if the Government of the Islamic Republic of Afghanistan's (GIRoA) decides to establish an NRF, it would be to ensure fiscal stabilization and socioeconomic development. However, while the Minerals Law 2014 seems to suggest that the funds be used largely for the development of local communities, the National Mining Policy indicates that the fund should be used to promote the socioeconomic development of the nation, including local communities. Further while the National Mining Policy mentions fiscal stabilization as a goal, the Minerals Law 2014 does not. Lack of clarity at the stage of setting objectives of establishing an NRF may create operational issues at a later stage, and allows for greater discretion by fund managers.

Fiscal rules: Fiscal rules establish guidelines for the way funds are transferred into and out of the NRF. For example, as Lűcke (2010) points out, some considerations for designing these rules may include: (i) how much of resource revenue is used for current government consumption and how much is to be transferred to the NRF; (ii) if the fund is to perform a stabilization function, how money is to be withdrawn from the fund if revenues fall short of expectation; (iii) how should the capital stock of the fund be invested; and (iv) how should investment income from the fund be spent?

Diverting a larger share of resource revenue from current consumption may be easier in a high-income context than in an LMIC with immediate consumption needs. In addition, as the experience of Azerbaijan and Venezuela shows, ensuring compliance with the established fiscal rule for transfers can be more challenges in countries with weak public finance institutions. For example, in Azerbaijan, while the 'Long term strategy on the management of oil and gas revenues' for the State Oil Fund of the Azerbaijan Republic mandates that between 2005 and 2025 at least 25 per cent of revenue from oil and gas should be saved when revenues from these resources peak, in practice SOFAZ's transfers to the state budget have increased to an extent that the 25% saving rule has been violated (Aslanli 2015).

When revenues fall short of expectations, government should not arbitrary withdraw from the NRF to meet shortfalls. For example, in Venezuela, when the fund was initially established in 1998, the rules provided that resource funds could be withdrawn, with the approval of Congress, if: (i) oil revenues were lower than the reference values; and (ii) resources in the fund were more than 80 per cent of the average annual oil revenues in the preceding five years. Further, it was specified that fund balances at the end of a fiscal year should not be less than one-third the balance at the end of the previous year. However, in 1999 modifications were made to these rules allowing for Presidential discretion for withdrawals. The gradual weakening of rules eventually led to the fund becoming defunct in 2003.

Thus, as can be seen from the examples of Azerbaijan and Venezuela, compliance with fiscal rules is as important as establishing rules on how much to transfer to the NRF and how to withdraw funds from it.

On the third and fourth considerations relating to establishing fiscal rules, capital stock of the fund can be invested either domestically or abroad, in a range of assets including government bonds, equities and foreign direct investment. While certain countries such as Norway may choose to invest the entire amount of their fund abroad and in financial markets, others such as Angola, Kazakhstan and Nigeria, allow for domestic spending as well. It is argued that low-income countries may have more compulsions to invest in creating domestic infrastructure, and this can be fulfilled through NRFs. On the other hand, others point out that investing domestically may exacerbate Dutch

Disease. Further it is pointed out that domestic investment may be routed through transfers from the NRF to the state budget, as this allows for a greater amount of scrutiny on investment decisions (Bauer 2014).

It is recommended that initially the investment portfolio of an early stage NRF should be conservative, with high liquidity and low risk (Aslanli 2015). Poor investment decisions and lack of oversight resulted in losses of $1.2 billion for the Libyan Investment Authority in 2008, while the Kuwait Investment Authority lost $5 billion for similar reasons between 1980 and 1992 (Bauer 2014).

Thus, as can be seen, clearly defining the objectives of the NRF, establishing fiscal rules and investment rules, ensuring oversight of the fund's activities and promoting transparency and accountability in its operations, can all contribute to ensuring effective management of resource revenues through NRFs. However, in Afghanistan's context, establishing a robust institutional framework will play a key role whether the NRF contributes to sustained economic growth or conversely worsens conflict in the country.

Brown and Blankenship (2013:40) note:

> developing a successful extractives sector that does not create or exacerbate conflict relies on the government being able to address four core challenges: minimising the negative social, human rights and environmental impacts of mining; ensuring mining benefits all Afghans by managing revenue effectively and diversifying the economy; strengthening transparency and accountability to reduce corruption and providing responsible security around mine sites.

While an NRF can contribute to minimizing the negative impacts of mining, ensuring that mining benefits all citizens, diversifying the economy and improving transparency and accountability, it will operate in a broader context of low legal and institutional capacity, prolonged political crisis, rent seeking by political elites and interference by external countries and corporations.

The enactment of a comprehensive set of laws relating to the regulation of extractive industries, and the fact that Afghanistan became an EITI member country in 2013, are steps towards improving governance of the extractives sector in the country. However, if it is to meet the goals set out in the National Mining Policy and the Minerals Law 2014, there is a need to address a range of issues including low levels of information about existing natural resources and their governance, and managing expectations of citizens relating to job creation, improvements in infrastructure, and improved access to services in the short and medium term while the necessary infrastructure to explore and extract mineral resources is set up. Realizing these benefits would also depend on the institutional framework and political will of the executive and legislature. A third issue to address is preventing the capture of mineral resources by local political elites to enable effective community development.

In terms of operationalizing an NRF in the country, evolving public consensus on the usefulness of an NRF also becomes central to its success. National and community-level stakeholder discussions can provide important insights in the process of formulating a natural resource fund which can meet immediate and long-term goals of the citizens of the country.

MYANMAR

KEY MINERAL RESOURCES IN MYANMAR

Myanmar is one of South Asia's most resource-rich countries. Its natural resources include oil and gas, various minerals, precious stones and gems, timber and forest products and water resources with hydropower potential.[12] Of these, natural gas, rubies, jade and timber are the most valuable, and currently provide a substantial proportion of the national income. Myanmar dominates production of jade and is the source of approximately 90% of the world's rubies. In the minerals sectors, the oil and gas sectors generate the most revenue for the government.

Mining activities in the country can be traced back as early as the 15th century. During the British rule, the government granted mining leases mainly to British private companies for producing lead, zinc, silver, tin, gemstones and gold. After independence, the government of Myanmar entered into joint ventures with British companies in the early 1950s and 1960s. Private companies were subsequently nationalized, following which mining was carried out mainly by the government and only certain mining activities were permitted for cooperatives and private individuals. While Myanmar's official production value of minerals and gemstones was estimated at USD 1.5 billion, the total output from the mining sector is generally considered to be much higher (NRGI (2016)).

The government relies heavily on resource revenue, and thus budgetary and non-budgetary expenditure is largely dependent on resource revenues. However, despite its mineral wealth, Myanmar is one of the least developed nations in the world as it has not been able to optimize generation and allocation of resource revenues, largely on account of illegal mining and military control of the extractive sector. During the late 1980s and early 1990s, the extraction of natural resources increased in the ceasefire areas, such as mining and logging in the Kachin, Shan and Kayin states. In many cases, NRR were used to reinforce the power of local elites.

The country has witnessed a civil war lasting over the last 60 years. State and regional governments were created by the 2008 constitution, which came into force in 2011. The 2008 constitution provides for limited sub-national involvement in revenue collection and management. The year 2016 marks a historical power shift, with a civilian majority government coming into power, led by the National League for Democracy (NLD).

The extractive sector accounted for 39% of exports in 2010 and the national government collected MMK 442 billion (approximately USD 460 million) in mineral revenues in 2013-14 (NRGI 2016). Independent sources place the value of mineral exports and production much higher than the officially reported USD 1.15 billion in exports in 2013-14 (NRGI 2016). However, the collection of revenue in the country is said to be challenging, as payments from extractive industries often go unrealized (NRGI 2016). Many resource rents are appropriated by local elites, diverted to military enterprises, or escape taxation altogether through illicit markets. Revenue collection related to much of the trade in jade and other precious minerals is not accounted in official estimates.

Lack of transparency during decades of military rule has raised many questions about the potential for misappropriation of resource revenues in the current context. Revenues were used to meet the needs of the government, including to ensure the military's continued control. In addition, while

[12] The natural gas reserves estimated at 10 trillion cubic feet. (See. https://www.indexmundi.com/energy/?product=gas&graph=reserves&display=rank, accessed on 7 December 2017).

natural resources were sold to neighbouring countries, the local population did not get any share of the revenues generated. The infamously opaque extractive industries and the unfair sharing of resource benefits have also been drivers of conflict in multi-ethnic areas. Unregulated and illegal mining has also had adverse impacts of the extractive activities on the society and the environment, through deforestation, land and water pollution, and loss of livelihoods. The Vice President of the country in 2014 said:

> environmental degradation has become noticeable across the country due to exploration of natural resources, and that plans should be made to reduce the impacts and to conserve the environment [and] that these measures require educative programmes, persuasion, rules and regulations. [13]

Further, initiating resource extraction projects in these conflict-ridden areas is difficult and at times is seen to increase conflict given competition for benefits among ethnic groups.

INSTITUTIONS, LAWS AND POLICIES REGULATING THE MINERALS SECTOR

The responsibility for overseeing the management of natural resources including oil and gas, minerals, and water resources for hydropower, is divided between ministries by sector.

In 1989, Myanmar embarked on a policy of encouraging foreign investment and invited foreign companies to invest in the mineral sector. It offered to provide raw materials and existing facilities as its participation in joint ventures with foreign partners which sought to ensure fair returns for both foreign investors and the government. The most common type of contract between the government and foreign investors in Myanmar is the production sharing contract (PSC). Under a PSC, the government continues to own the resource, while sharing profits with a company or consortium of companies that conducts exploration, development and production activities. The contract generally involves payment of a royalty to the government, bonuses to the government upon signing an agreement and reaching certain production levels, and sharing profits from the sale of the resource with the government.

The Myanmar Mines Law was promulgated in 1994.[14] It grants ownership rights over mineral resources to the State. This implies that all naturally occurring minerals found either on or under the soil of any land and in the continental shelf are deemed to be owned by the State. Amendments to 1994 law made in 2015 seek to address certain areas of concern to potential investors including:[15]

- Increasing the maximum production period for large-scale production projects to 50 years;
- Allowing joint ventures between foreign and local investors, in the case of small- and medium-scale production projects upgraded to become large-scale production projects;
- Providing a guaranteed right to an extraction/production permit for those who have successfully carried out prospecting and exploration and completed a feasibility study.

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[13] See New Light of Myanmar (30 July, 2014) 'Myanmar in dire need of environmental conservation plans: Vice President' Wednesday. http://www.burmalibrary.org/docs19/NLM2014-07-30-red.pdf, page 3 (accessed 29 November 2017).

[14] State Law and Order Restoration Council Law No. 8/94, Myanmar Mines Law 1994, http://www.mining.gov.mm/DM/1.DM/1.DM_Menu_68/mining_law.pdf

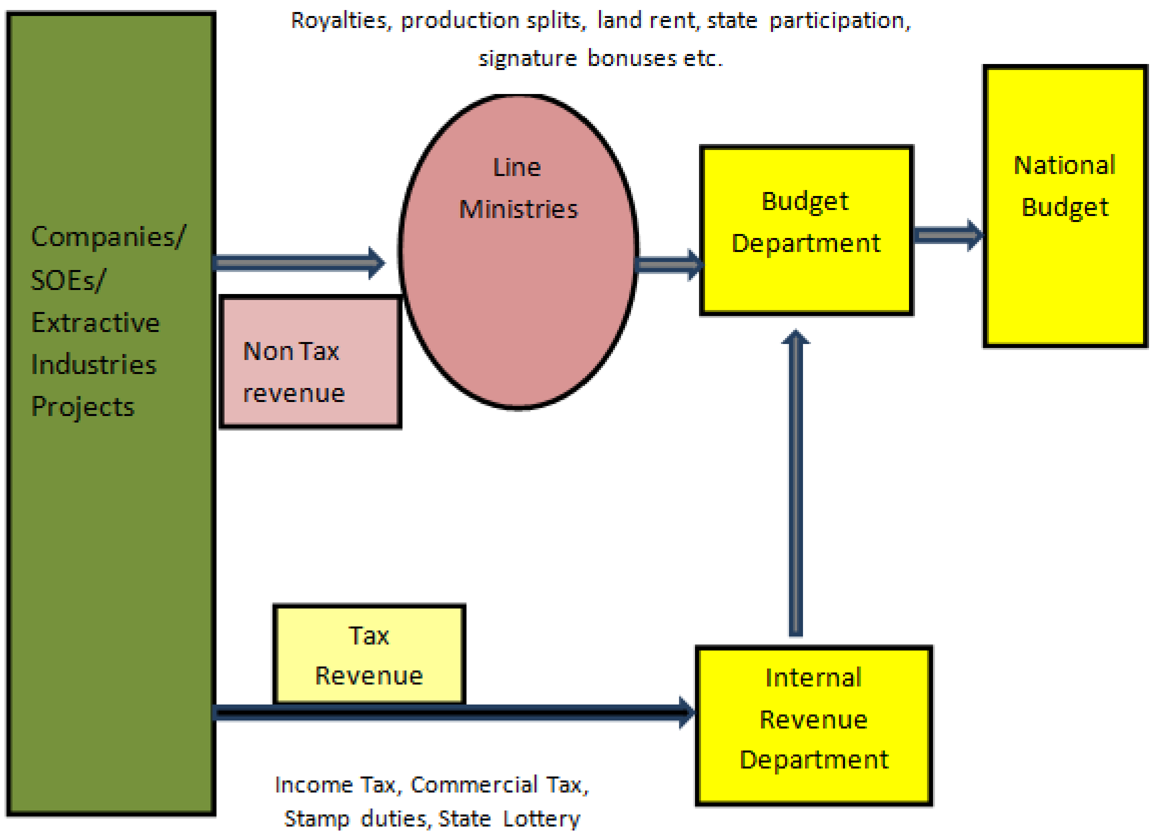
[15] Law No. 72/2015 (the 'Mines Law Amendment 2015') https://www.resourcedata.org/dataset/rgi-the-law-amending-the-myanmar-mines-law-union-parliament-law-no-72-2015/resource/8929dd0e-f131-40b3-ae4e-4e7127f11dd5 (accessed Dec 12 2017)

The Environmental Conservation Law, passed in 2012, provides principles and guidance for integrating environmental conservation in the nation's development.

All oil, gas and mining tax and non-tax revenues, other than in the case of illegal mining or appropriation by armed groups, are collected directly by the national government or state-owned entities, as prescribed by the 2008 Constitution.[16] The revenue collection mechanism for the extractive sector in Myanmar is given in Figure 1.

However, it is important to note that there are data gaps on prices, extraction volumes, and payments. In addition, several payments may not even flow through the channels indicated in the figure as they are deposited in multiple bank accounts. Further, information on production volumes and payments is not publicly disclosed. All these factors make it particularly challenging to estimate revenue flows accurately. Additional sources of uncertainty include the largely informal extraction and payment practices (especially in the non-gas sectors), extensive tax holidays and the existence of military-owned companies, combined with parallel administration of some resources by sub-national entities. It is also relevant to mention here that in the 2017 Resource Governance Index, Myanmar's oil and gas sector ranked 77 out of 89 countries, while its mining sector ranked 83.[17]

Figure 1: Revenue collection mechanisms for the extractives sector



[16]In the face of centralized control over revenue, many ethnic groups have long asserted their right to make decisions over resource management in their states. Combatants in areas of active conflict and leaders from several ethnic minority parties – particularly those associated with Kachin, Rakhine and Shan states – have openly called for greater resource revenue sharing.

[17] The Resource Governance Index (RGI) measures the level of transparency and accountability in the oil, gas and mining sectors of 89 countries. See https://resourcegovernance.org/sites/default/files/documents/2017-resource-governance-index.pdf (accessed 29 November 2017).

Source: Min Zar Ni (2015).

With regard to sharing of the revenue with sub-national governments, Myanmar is undertaking a process of fiscal decentralization in accordance with the 2008 Constitution. This involves allocating several key responsibilities to sub-national governments, such as oversight of local ports, roads and bridges, small and medium-sized electric power production and distribution, and agricultural water management. Since regions and states are not allowed to raise significant tax revenue, they are reliant on transfers from the national government to finance expenditures. Transfers of revenues (including natural resource revenues) to sub-national governments are made on an ad hoc basis.

According to the World Bank's Myanmar Public Expenditure Review, the revenue assignments to states or regions are very limited at 6 per cent of public sector revenue (Addison et al. 2015). Own-source revenues financed 36 per cent of total expenditures in 2013-14; the remaining 64 per cent was financed from transfers from the national government. The distribution of own-source revenues is uneven, for example, in 2013-14, 68 per cent of own-source revenues were collected in Yangon and Mandalay.

Intergovernmental fiscal transfers have grown rapidly in the past three years, but the lack of a rules-based system for determining general-purpose grants has made them ad hoc and unpredictable on a year-to-year basis. They are disproportionately large on a per capita basis in conflict-prone areas and in states and regions with more active politicians. This has made development planning difficult and sub-national revenue sharing susceptible to patronage and political manipulation. While some have argued that states and regions with greater development needs are receiving a higher share of revenues, in practice, conflict-affected areas have generally received a higher per capita share of revenues. The newly elected NLD has committed to "work to ensure a fair distribution across the country of the profits from natural resource extraction, in accordance with the principles of a federal union".[18]

Another key issue in the management of resource revenue in the country is the fact that SOEs such as MOGE and the Myanmar Gems Enterprise (MGE) retain significant amounts of natural resource revenue in what is termed 'Other Accounts'. While some Other Accounts are simply payment mechanisms for subcontractors or international donors, others are enormous funds kept at the Myanmar Economic Bank, only reviewed by a select few inside the Ministry of Planning and Finance and the Auditor General's office. Myanmar's citizens are unable to monitor how the money is used or whom it is benefiting. In 2013-14, MOGE transferred more than 1.3 trillion kyats (USD 1.1 billion) into 'Other Accounts' equivalent to 60 per cent of all its oil and natural gas revenues and an amount more than that spend on either public health or education. Currently, the national parliament and public interest groups do not have access to data to be able to make informed recommendations on the amount these powerful organizations should retain for reinvestment purposes, or, alternatively, whether the system should give the national parliament greater power to approve their budgets.

There is scope for the government to extract more value from the mining industry by combating illegal mining and attracting sustainable FDI into both existing and new projects. This would lead to substantial royalty increases to meet infrastructure development and other social objectives. Gem production monitoring could be improved, and incentives provided to combat illegal mining activities, thereby generating much-needed revenue.

Lack of transparency is a key challenge for resource management in the country. Myanmar has no freedom of information law, and environmental and social impact assessments are not required. It is

[18] http://www.burmalibrary.org/docs21/NLD_2015_Election_Manifesto-en.pdf (accessed 29 November 2017).

unclear which authority receives payments from extractive companies. Myanmar's Auditor General has the authority to scrutinize extractive revenues, but audit procedures are not known, reports are not made public, and the auditor's findings are not systematically presented to lawmakers. It is widely assumed that corruption is rampant in the sector and that much of the country's resource revenues have been appropriated by a few political elite. However, in June 2014, Myanmar acquired status as an EITI candidate country, thus committing to implementing the EITI standards and becoming a compliant country within three years. However, Myanmar was not EITI compliant at the time of the publication of this review in December 2017. EITI is a global standard that helps countries improve the governance of the extractives sector. The Myanmar government's 12-point Economic Policy highlights the strategic role of EITI in the reform process, specifically in natural resource governance. EITI creates a platform for discussions on issues around resource sharing, which is widely debated and central to the on-going peace process.

EITI is also stimulating public debate and shedding light on lost revenues from the jade and gems sector. Official revenues from gemstone sales in 2014 were estimated at US$3.4 billion, according to the first Myanmar EITI (MEITI) Report published in 2016 (MEITI 2016). However, there appear to be discrepancies between various sources of information with some estimates as high as over US$ 30 billion (MEITI 2016). According to a study commissioned by MEITI in 2016, it is estimated that 60 to 80 per cent of gemstones produced in Myanmar are not declared and therefore bypass the formal system (Irwin 2016). The first EITI Report disclosed that future Myanmar EITI Reports will include royalties from jade and gems disclosed by both government and companies.

CONTEXTUALIZATION OF REVIEW FINDINGS

In this section, we attempt to contextualize our findings for Myanmar. The first question that arises for contextualization is whether it is the right time for setting up a NRF. If the answer is yes, then the next question that is relevant is what is or are the right model(s) for the NRF, stabilization funds or savings or future generations funds? The third question relevant for contextualization is what should be the spending priorities of such an NRF, investment or strategic development funds, investment in foreign or domestic assets or spending to meet social sector priorities?

There has been some thinking about NRFs in Myanmar. In a national level conference organized on natural resource governance in 2014, there were detailed discussions on the considerable windfalls from the extractive sector that are expected by the country over the next decades and how NRFs could be established as tool to better manage oil and gas revenues. Both the Government of Myanmar and other participants at the conference expressed an interest in creating a framework for the establishment of a fund. In 2015, the Ministry of Finance was researching the potential for an NRF, in collaboration with the government of Norway.

The political actors in the country have also highlighted the need for the creation of a strengthened legal and regulatory framework for governing natural resources in Myanmar. The World Economic Forum (2013: 38) raised similar concerns and noted that:

> the ability for Myanmar to translate natural resource wealth into prosperity will be dependent upon its ability to set the rules of the game for all stakeholders, nurture domestic capacities where they might be competitive, including human capital, and create infrastructure and services that allow for a successful industrial presence and beneficial supply chains.

The 2015 World Bank Myanmar Public Expenditure Review (Addison et al. 2015) has noted:

> Establishing a sovereign wealth fund is another option for managing oil and gas revenue volatility. These funds can play several roles. They can accumulate savings for intergenerational equity, which may require rules for example on withdrawing only interest earnings so that the capital can grow (or be maintained) in real terms over the long-term. These funds could also help to smooth revenue flows into the budget, saving when revenues are high and allowing draw-downs during commodity price downturns (Section 2.33).

The review also highlights the need to manage risks from commodity price volatility and has suggested that the profits from hydrocarbon should be managed and fiscal rules should be adopted.

In the context of resource governance in Myanmar, there is a need to manage revenue from the extractive industries effectively, both in terms of generation and utilization. Setting up a responsible revenue management system with greater transparency and accountability can ensure that the benefits of the country's resources are shared more equitably among its people and used for the country's sustainable development.

An NRF established with the revenues from the extractive industries could be a useful tool in this regard. Such a fund could have several benefits for Myanmar. It could ensure that public expenditure is not significantly affected by fluctuations in world prices of mineral resources. This is a key challenge for countries which depend on revenue from extractive industries. Public revenue plunges when mineral prices fall, which often leads to dramatic cuts in government spending and abandoned or postponed infrastructure projects. Since Myanmar seeks to improve the functioning of the sub-national governments through fiscal decentralization, sub-national governments can also be allowed to save NRR windfalls in an NRF for times when revenues decline unexpectedly. However sub-national governments may have trouble managing these savings, and these sub-national NRFs may become channels for political patronage and corruption.

Another key advantage of an NRF would be to prevent a negative impact on exchange rates and inflation levels from a large influx of foreign currency, in particular Dutch Disease which can undermine the domestic manufacturing sector. For Myanmar, an NRF could potentially play a role in bringing about equity in sharing and distribution of resource revenue, thereby reducing conflict, and strengthening federalism through the allocation of revenue from extractive industries directly to the sub-national governments.

However, the establishment of an NRF is only a small component within a wider framework for managing NRR. In terms of the kind of NRF that Myanmar could consider, it is important to examine several aspects to enable the fund to address macroeconomic and budgetary issues.

Fiscal space: The creation of an NRF requires that there is sufficient fiscal space to allow revenue to be diverted to a fund (after certain priority expenditure has been undertaken) rather than it being used for spending on ad hoc basis or for covering government inefficiencies. The country is characterized by a narrow revenue base and limited financing options. It has witnessed some revenue windfalls from one-off measures, which have enabled the government to rapidly increase spending while maintaining fiscal deficits within 5 per cent of GDP (Addison et al. 2015). Thus, the limited fiscal space needs to be addressed first. This could be done through various measures, such as widening the tax base, initiating an expenditure review of military expenditures to identify potential efficiency gains, and reviewing of investment practices and capital expenditure efficiency.

Transfer of resource revenue to the fund: Since revenue collection currently takes place through the SOE, MOGE, and IRD, and the SOE is allowed to retain up to 55% of its net revenues for its own use, the transfer of this revenue to the NRF could become a challenge. Additionally, how the enterprises manage these funds is not disclosed to citizens, or to their elected representatives. Therefore, what may be needed is a single account for all extractive industry revenue. This control over revenue is also important from the perspective of sterilizing the revenue inflow and implementing policies to avoid Dutch Disease.

Oversight and transparency mechanism: One of the key challenges for Myanmar would be to ensure improved oversight and transparency. This is critical to ensure that an NRF becomes an effective tool to achieve its policy objectives. If citizens can freely access information about how much revenue is paid to the government, and how that revenue is used, there will be less opportunity for corruption and misuse of funds, and a higher potential for revenues to be used in a manner that benefits a diverse group of people.

It is worth noting here that the Myanmar is in the process of implementing EITI, and can generate significant potential through this for strengthening the transparency mechanism. Myanmar's first EITI report has allowed the stakeholders a lot of insight into the natural resource sector (MEITI 2015). EITI data can support advocacy for reformed and responsible governance of the extractive sector, which would include improved accountability for the SOE's revenues, greater oversight of the extractive sector and transparent rules pertaining to the disclosure of contracts and beneficial owners, and sharing information with stakeholders and citizens. With professional management and strong accountability mechanisms into its functioning, along with appropriate public finance management practices, the NRF could be an effective tool for revenue management.

Time period: A final point is that experience has shown that establishing an NRF takes time and it can take several years for it to have sufficient funds. For example, in Norway, it was six years after it was established that the first deposits were made.[19] Therefore, it is important to look at these funds from a long-term perspective. In the case of Myanmar, with the government running a high fiscal deficit, which is also expected to continue for three to four years according to the IMF forecast), resource revenue may be used for meeting the deficit in the absence of strong fiscal rules and policies. In this case it would not result in any savings, as the deficit would need to be covered first before savings are made from the revenue. The fiscal rules around the use of revenue from extractive resources need to be defined such that they reduce the deficit, while also ensuring some savings for the fund.

In order to understand the spending or investment priorities of NRFs, it is first important to recognize that the establishment of NRFs is not a substitute for strengthening fiscal management or improving governance in the country. The money from the NRF can be used for multiple options; investment or strategic development funds, investment in foreign or domestic assets or spending to meet social sector priorities. However, the objective of long-term fiscal sustainability needs to be kept in mind. Even though NRFs are typically seen as savings funds, they can also be tools for spending domestically for productive investments.

When seeking to meet social sector priorities, such as education, health and physical infrastructure, or environmental protection and local development, through an NRF, it is important to have clearly defined fiscal rules that govern this spending. Weinthal and Luong (2006) suggest that for an NRF to work, the government needs an efficient, meritocratic bureaucracy, insulated from political pressure and effectively constrained by credible checks on executive authority. It is important to highlight here that the countries such as Norway, Chile and Saudi Arabia have effectively used NRFs to help

[19] Fact Sheet Norway (2014) : https://www.regjeringen.no/globalassets/upload/oed/pdf_filer_2/faktaheftet/fakta2014og/facts_2014_nett_.pdf (accessed 7 December 2017)

stabilize their budgets, overcome Dutch Disease by sterilizing capital inflows, and created an endowment for future generations. Finally, the NRF's investment strategy must match its objectives.

With regard to spending mechanisms, a variety of strategies may be explored to share resource revenue directly with citizens, including targeted redistribution schemes (for example, transfers targeted at marginalized groups), as well as direct distribution to all citizens.

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