1. Introduction

In most resource-rich countries, national governments share oil, gas and mineral revenues with state and local governments through intergovernmental transfers or tax sharing. Of the 58 resource-rich countries listed in the Revenue Watch Index, 31 have central-subnational resource revenue sharing mechanisms including Brazil, Canada, Indonesia, Iraq, Kazakhstan, Nigeria, Russia, and the United States. In countries like Nigeria and Peru, some regional governments depend on extractive resources for more than 90% of their revenues.

Regardless of the size and level of government, managing large, volatile and finite revenues presents serious challenges. Oil, gas and mineral revenues can destabilize the local economy, lead to wasteful spending, undermine local accountability, and increase conflict over control of natural resources. These challenges are particularly severe in subnational (SN) jurisdictions with less control over fiscal levers and with limited bureaucratic capacity compared to national jurisdictions. If subnational governments do not anticipate and deal with these challenges effectively, the benefits may be felt by only a lucky few and many may be made worse off than would have been the case without extraction.

This paper provides guidance to subnational governments on managing extractive revenues. Effective, transparent and accountable revenue management is essential for promoting sustainable and inclusive local economic growth that remains robust well after extractive revenues stop flowing. Three specific challenges, and options for addressing them, are described: Revenue volatility, long-term economic booms and busts, and unpredictability and uncertainty of revenues.

2. Revenue Management by Subnational Governments

Subnational resource-rich jurisdictions are often “revenue-takers”; unlike national governments that can raise their own resource revenues, they usually do not have the authority to assign taxes or sign large oil, gas or mineral contracts. In a few cases, SN jurisdictions have some taxation powers or may levee surface fees. Argentina, Australia, Bolivia, Canada, China, the United States, the UAE, Mexico, Indonesia, the Philippines, and Papua New Guinea are some examples. However in most – with the exceptions of Canada,
the US, and the UAE – revenues collected directly by SN governments are extremely small relative to oil or mineral revenue shares redistributed by national governments.

Consequently, many resource-rich subnational governments depend on national government revenue sharing for most of their revenue. For example, the Peruvian municipality of Echarate (population 42,000) received $257 million from central government gas revenue sharing in 2012 out of a $268 million budget. Similarly, the municipality of Ilabatya (population 4,000) received $56 million in 2012 from copper revenues, representing 94% of its annual budget.

This dependence can have serious consequences. Over the short- to medium-term (0-5) years, it can make local infrastructure and social service provision more difficult. Since oil and mineral revenues are volatile – rising and falling dramatically with increases and decreases in commodity prices – and since most subnational governments spend all the money they receive in a given year, reliance can cause ‘pro-cyclical fiscal policy’ at the local level. This is a tendency to spend a lot when revenues are high and cut spending drastically when revenues drop. In countless examples, resource-rich governments have

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spent lavishly on ill-conceived legacy projects like fountains and fancy government buildings when they have received ‘windfall’ revenues rather than taken the time to plan investments that will promote sustainable economic development and serve the population for years. And when oil or mineral prices have dropped, cuts have left roads half-finished or buildings unmaintained.

Over the longer-term (over 5 years), SN governments usually cannot control cash flow and planning of the oil or mineral sectors. In theory, as an oil field or mine begins production and significant revenues begin to flow, SN governments behaving optimally would increase expenditure at a slow, steady rate in order to allow the bureaucracy time to plan and invest effectively on roads, schools, hospitals and other infrastructure projects. This is referred to in the economic literature as “smoothing expenditure over time” (note: the terms expenditure and spending are analogous).

However the lack of control over revenues means that they are likely to receive large revenues at peak production – several years after production begins – then collect less and less as production tapers-out (see Figures 1 and 2 for typical petroleum and mineral revenue projections). Since most governments do not “smooth” spending, this rise and fall in revenues is usually translated into an equal rise and fall in spending. In many regions, SN jurisdictions have found themselves starved of cash once resources have been exhausted.

What’s more, SN jurisdictions are unlikely to have full information on expected revenues over the lifespan of the field or mine. As a result, SN governments may have serious trouble deciding how much revenue to save and how much to spend, if they are allowed by the central government to save at all. Instead, they are likely to increase spending drastically when oil or mineral production starts as mentioned, leading to waste, mismanagement and sometimes outright theft of revenues, only to be left with idle infrastructure or an undiversified economy when production slows and the revenues have been spent.

Figure 1: Project Timeline for a Typical Oil and Gas Project
To help overcome these challenges, this paper makes three policy recommendations:

1. Develop a long-term spending plan that provides public services and promotes economic growth and diversification;
2. In the short to medium-term, smooth expenditures from month-to-month and year-to-year by saving revenues; and
3. Where saving is not an option, accurately forecast tax revenues and intergovernmental transfers for budget planning and manage public debt, where allowed by the national government.
Subnational governments may also wish to influence the design of a widely-accepted, equitable, rules-based, predictable and transparent oil, gas or mineral revenue sharing regime with other levels of government. Revenue sharing formulas, including both the split in natural resource taxation rights and intergovernmental transfers, are constantly being renegotiated in response to changing political and economic circumstances. That said, this paper will focus on the revenue management challenges that are expected to be in the direct control of SN governments.

**Box 1: Macroeconomic Frameworks for Resource-Rich Local Governments**

Subnational governments rarely control revenue generation. In most cases, the majority of taxes, grants and other revenue are collected by the national government and transferred to subnational governments. These intergovernmental transfers are often local governments’ main sources of revenue. Intergovernmental transfers are often distributed in lump-sum annual or quarterly amounts.

Resource-rich jurisdictions are particularly at the mercy of national governments when there is a special oil, gas or mineral revenue sharing scheme. It is often unclear whether or not the amount distributed is the right amount based on the revenue sharing formula and the value of the resources extracted. In the Democratic Republic of the Congo (DRC), Ghana and the Philippines, for example, local governments rarely know how much they are owed from oil, gas and mineral revenues and whether the amount they are receiving is correct. This lack of information about revenue sharing and the volatile nature of oil, gas and mineral revenues make planning the budget quite difficult. It is therefore not unusual for local governments to vastly underestimate or overestimate revenues. For example, the oil-rich Nigerian state of Bayelsa underestimated revenues by 97% in 2000 and overestimated revenues by 20% in 2007 (Ekenakumo and Braye 2011).

When a local government spends more than it collects in revenues, it runs a *deficit*. An underestimation of revenues usually leads to a *surplus* (revenues exceeding expenditures) during the year; an overestimation usually leads to a *deficit* (expenditures exceeding revenues). A surplus can be handled in four different ways: Increase spending, decrease taxes, pay down public debt or save revenues. Similarly, a deficit can be handled in five different ways: Cut spending, increase taxes, incur public debt, draw down on public savings, or ask the central government for a bailout.

Not all of these options are available to subnational governments. For example, balanced budget rules or other financial constraints may mean that local governments are unable to borrow or save. In these cases, local governments may need to seek additional funds from the central government.
Development Planning in Resource-Rich Regions

One means of improving spending outcomes is to plan ahead by creating a fully costed, comprehensive development plan (see Annex 1 for step-by-step details). Whereas development planning is important in any jurisdiction, it is especially important in resource-rich regions where oil or mining can suddenly generate massive revenues for 20-30 years that just as quickly disappear, leaving shrivelled economies behind. Governments addicted to high revenues may find themselves forced to cut essential services or investment. Private businesses may also become dependent on the resource sector when revenues are high, leading to a harsh adjustment when the sector vanishes.

While most SN governments establish a fiscal envelope (the total amount of revenues and expenditures) for the following year, which is used to write the budget, SN governments should also have multi-year plans that include estimates of revenues, expenditures, how they will use extra unexpected money (i.e. ‘windfall revenues’) and how they will pay for a deficit when spending is greater than revenues. This will allow them to plan for life after extraction.

Multi-year plans are also important in oil- or mineral-rich jurisdictions because revenues are volatile. Relying on only annual budget forecasts and fiscal envelopes can cause large increases in spending in years when revenues are high and large drops when commodity prices drop. It is therefore useful for resource-rich governments to ignore year-to-year revenue changes and plan using a long-term estimate of revenues (see below on expenditure smoothing and forecasting revenues for details).

To develop a long-term plan, public projects to be funded by natural resource need to be identified and agreed on. In many cases, long-term development strategies have been
more vision statements than concrete plans. Vision statements should be avoided in favour of goals such as diversifying the economy, providing basic services to all residents, investing in health and education and compensating those burdened by extractive activities. These plans should be widely agreed by the public and be aligned with regional development goals. Plans should include (see Annex 1 for details):

- Development objectives in the short-, medium- and long-term
- An analysis of the gap between objectives and current situation and how to fill those gaps
- A list of priority investments to fill the gaps
- A land management plan
- A realistic timeline with concrete targets
- Roles and responsibilities of government officials, companies, interest groups and other stakeholders
- A strategy to build consensus on the development plan

These plans must be revised every few years to reflect changing circumstances. Ultimately, they must be reflected in annual budgets, even as they change. Such integration is essential for ensuring that long-term objectives are translated into budgeted activities. In some countries, a specialized government agency has been established to guarantee consistency between the medium-term development plan and the annual budget (e.g. China’s National Development and Reform Commission; Malaysia’s Economic Policy Unit).

**EG OF INVESTMENT PLANNING IN PERU**

Actively involving citizens in the development planning process can be useful in managing expectations about the benefits of resource revenues and building trust. High levels of transparency, public education and citizen participation are also necessary to reduce the potential for the increased corruption that high ‘windfall’ revenues can often generate.

For capacity-building projects in extractive contexts, it is especially important to think about participation, not only as a project-based planning exercise, but as an approach to building local communication systems that can keep stakeholders involved in local decision making over the long-term. Indeed, participation in such contexts should not be considered only as a part of the planning process, but as an on-going activity that helps shape accountability between citizens and the government.

**EG OF MID TERM PLANNING PROCESS IN INDONESIAN DISTRICTS**

*Smoothing Expenditures through Fiscal Rules and Saving in a Fund*

Oil, gas and mineral prices are volatile and unpredictable. In 2008, oil prices crashed from $140 to $40 per barrel in about six months. Since oil revenue is determined by volume
times prices, this short- to medium-term price volatility makes it difficult to predict revenues. Uncertain revenues in turn make it difficult to know how much is available for government spending. And since most local governments spend all the money they receive, uncertain revenues make it difficult to plan a credible budget. All too often the result is ‘pro-cyclical’ fiscal policy, i.e. government expenditures rising significantly when oil revenues increase and falling when oil revenues fall, exacerbating economic trends.

When spending increases too quickly, the bureaucracy finds it difficult to adjust, leading to poorly conceived, designed and executed capital projects. Private businesses are also affected, growing and proliferating when government expenditures are high, and suffering when the government cuts spending sharply and demand drops. In this way government expenditure volatility can lead to bankruptcies in the wider economy.

As much as they harm economic growth and prevent poverty reduction in the medium-term, these ‘boom-bust’ cycles can also be played out over the long lifespans of fields or mines, whether they last 5, 10, or 30 years. For example, Figure 3, which shows expenditures, oil revenues and other tax revenues in Alberta (Canada) over a 63 year period, reveals three distinct ‘boom-bust’ cycles between 1975 and 1990. In jurisdictions with special rights to collect resource revenues, public spending rises substantially when production and prices are at their peak. However, this spending has often proven unsustainable, especially at the local level. History is replete with stories of mining communities being abandoned after the mine closes, leaving behind ghost towns and depressed economies.

**Figure 3: Long-term expenditure volatility and pro-cyclical fiscal policy in Alberta (Canada) from 1928-1991**
Since most subnational governments cannot control revenue volatility via tax policy or through oil or mineral contracts, the only way they can address these problems is by delinking expenditures from revenues. As such, resource-rich governments may wish to “smooth” expenditures in the short-, medium- and long-terms instead of allowing them to go up and down with revenues. For example, local governments can limit expenditure growth to X% per year, regardless of revenues. Alternatively, local governments can limit the amount of revenue entering the budget. For instance, they can pass a law stating that only 50% of mineral revenues will be spent in any given year; the rest will be saved in a fund. Both of these limitations are types of fiscal rules.

Figure 4 illustrates the first type of fiscal rule, called an expenditure rule. The blue line represents volatile revenues. If there is no expenditure smoothing, expenditures equal revenues at all times. If there is expenditure smoothing, then revenues are still represented by the blue line but expenditures are represented by the red line.
This example raises two questions: What happens to excess revenues in cases of budget surplus? And how does the government make up a budget deficit? In cases of surplus, the government can reduce public debt or save revenues. In cases of deficit, the government can borrow, draw down on savings or ask the central government for more revenue. In both cases, the decision will depend on whether it is allowed by the central government to borrow or save, the current level of public debt and, where they are not allowed to save or borrow, whether the central government is willing to change its policies towards subnational governments.

Figure 5 shows the response of two resource-rich subnational governments to volatile revenues. Bayelsa State is a major oil and gas producing area, contributing over 30% of Nigeria’s oil production. As an oil-producing state, it has the right to a significant share of oil revenues, somewhere in the range of 5% of all Nigerian oil and gas revenues, which totalled over $59 billion in 2008. Wyoming is an oil, gas and mineral-rich U.S. state with the right to set and collect its own natural resource taxes. In 2010 it produced 53 million barrels of crude and 2,517 trillion cubic feet of gas, generating $1.9 billion in oil and gas revenue for the state and local governments. Wyoming is also a major coal, bentonite, trona and uranium producer; coal alone generated $1.2 billion in revenue for state coffers in 2011.

While both governments are heavily reliant on natural resource revenues, their spending patterns could not be more different. Bayelsa’s spending has increased and decreased following rises and falls in oil prices. This has led to the type of wasteful spending (particularly on government buildings) and low growth that was referenced above. Wyoming on the other hand has not increased spending lately despite historically high oil revenues.

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2 Source: http://eiti.org/node/78/reports
3 Source: http://www.pawyo.org/facts.html
4 Source: http://www.wma-minelife.com/
and mineral prices over this period. This is due to its legislated limit on spending growth called the Spending Policy Amount (SPA), a fiscal rule designed to reduce volatility and save natural resource revenues for future generations.

**Figure 5: Short- to medium-term expenditure volatility in Bayelsa and Wyoming**

![Chart](image)

Like many other governments that have implemented a fiscal rule like the SPA, Wyoming had to decide what to do in years when they have surplus revenue. It, along with a number of US states (Alabama, Alaska, Oklahoma, Montana, North Dakota, and Texas) and a Canadian province (Alberta), has chosen to establish a so-called “natural resource fund” to store oil, gas or mineral revenues. While some have been established to stabilize local revenues over the short- to medium-term (e.g. Permanent Wyoming Mineral Trust Fund), others have been designed to ensure that future generations benefit from natural resources as much as present generations (e.g. Texas Rainy Day Fund). How well they function depends on the specific rules governing the funds, their accountability and transparency requirements, and whether there is adequate oversight by the local legislature and civil society.

Many of these funds contain sub-funds to earmark resource revenues for specific purposes or to prevent them from being used to bankroll operational government spending. For example, the Montana Permanent Coal Tax Trust Fund contains a number of
sub-funds, including the Treasure State Endowment Fund to finance infrastructure projects and the Big Sky Economic Development Fund to finance local economic development projects and certified regional development corporations. Annex 1 provides a step-by-step guide on how to establish fiscal rules and funds as well as ensure adequate oversight.

Governments are not the only entities that have enacted fiscal rules and established funds to save oil or mineral revenues. Local communities face some of the same challenges as national or subnational governments: Volatile revenues, overwhelming inflows of cash and unpredictability of revenues. As a result, several have established trust funds fuelled by resource revenues. For example, the Raglan Trust in the Salluit (pop. 1,347) and Kangiqsujuaq (pop. 696) communities of Northern Canada was established to distribute the communities’ share of Raglan mine revenues. Xstrata, the mine’s operator, deposited $2 million in the funds as start-up cash, and now deposits $0.3-1.1 million plus 4.5% of annual profit into the fund every year, to be shared between the territory of Nunavut and the two communities based on a formula. $15.2 million was deposited in 2010. While Kangiqsujuaq has decided to distribute most of its share in cash to residents, Salluit has used the trust fund to save 40% of their revenues for future generations.

Similarly, the Gelganyem and Kikaya Trusts in Australia earmark some of the communities’ approximately $1 million per year share of the Argyle diamond mine revenue to local economic development (e.g. employment and training programs) and a teenage girl development program. The remaining amount is distributed in cash to community members or saved until mining has ended.

In both the Canadian and Australian examples, the trust funds have strict rules for what revenues go into the funds, constraints on withdrawing money, who manages the funds and who they are accountable to, and transparency requirements.

**Smoothing Expenditures and Improving Development Outcomes Through Revenue Forecasting and Debt Management**

Some subnational jurisdictions, for one reason or another, are disincentivized or not allowed by the national government to save and establish natural resource funds. In jurisdictions like Bojonegoro (Indonesia) or Louisiana (United States), local governments have been driven to increase spending when oil prices have been high and to make drastic cuts when revenues have declined. In these cases, how can they address short- to medium-term volatility?

One option is to generate short-, medium- and long-term scenarios and plan for each one to prevent boom-bust cycles. These scenarios should be incorporated into the multi-year development plan and inform the decision on how much revenue to save and spend.
These scenarios require revenue forecasts for 1, 5-10 and 25-30 year periods, including any taxes and intergovernmental transfers. Among resource-rich countries, Timor-Leste, Papua New Guinea and South Africa all rely on long-term forecasts for development planning.

In some countries like Brazil, Colombia, Nigeria and Peru, forecasted revenues for SN governments are provided by the national government. However, these figures are sometimes unreliable or not disaggregated by SN jurisdiction or oil, gas or mining project, hence potentially unhelpful for SN budget planning. In others, forecasts by the national government are simply unavailable or inaccessible by subnational governments, as in Angola and the Philippines.

An additional complication is that, in countries like Brazil, Ghana and Indonesia, there are actually two separate intergovernmental transfer programs, one for general revenues and a separate one for oil, gas or mineral revenues. Among extractive revenue transfer programs, there are many that treat producing, neighbouring districts and non-producing jurisdictions differently. In order to calculate revenue shares, subnational governments must know how much oil, gas or minerals are being produced in each jurisdiction.

In countries with general intergovernmental transfer programs, local governments must have access to at least two sets of information to forecast revenues: The size of the total pool of money to be transferred to all SN jurisdictions and the mechanism / formula used to allocate that money. In countries with a special regime for oil, gas or minerals, additional information is required to forecast revenue shares as well as tax revenues: The terms of contracts, production cost estimates, and production volume or sales estimates. SN authorities would also need to assume a future price for the oil, gas or minerals. While some jurisdictions choose their price assumption arbitrarily, it is becoming increasingly common to use an objective price, such as an average of past, present and estimated prices or an independent forecast, for example from the International Energy Agency’s World Energy Outlook (WEO).

E.G. PERU FORECASTING

That said, the information necessary to forecast oil, gas or mineral revenues may be unavailable. Contracts are often secret, cost estimates are not disclosed by companies or the national government and production volumes and sales figures are either opaque or unreliable. In these cases, greater transparency in the oil or mineral sector may be required, including public disclosure of revenue information and flows from the national government to SN governments or an advanced Extractive Industries Transparency Initiative (EITI) process at the subnational level.

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6 IEA’s WEO can be found at http://www.worldenergyoutlook.org/
Once forecasts have been made, how can this information be used to improve revenue management? First, it can inform the development planning process as outlined above. After all, it is difficult to plan investment projects when one does not know how much money will be available in the coming years. Second, in jurisdictions where local government can borrow money, the forecasts can allow them to plan borrowing when revenues are temporarily low and to repay debt when revenues are high. In this way, they can achieve the same counter-cyclical policies illustrated in Figure 4 as using a natural resource fund.

Oil, gas and mineral rich jurisdictions with a large claim on resource revenues are simultaneously in an enviable and unenviable position. On the one hand, since they have large and nearly guaranteed revenue streams, banks are likely to offer loans to resource rich local governments at lower interest rates and on better terms than non-resource rich governments. On the other hand, the temptation to finance government expenditure, especially large infrastructure projects, through low-cost borrowing can be irresistible. Since their access to cheap financing increases when they have greater sources of revenue, resource-rich jurisdictions have a tendency to borrow money even when oil, gas or mineral revenues are at all-time highs.

In the long-run, over-borrowing and over-spending can lead to debt crises. In some countries, SN jurisdictions finances are implicitly guaranteed by the central government to the point that the central government will bail out SN government in crisis. Chile, Colombia, Indonesia, Mexico and Russia all bailed out local governments at times from 1982-2000. However other national governments, like those in Bolivia, Nigeria and Peru, have either been unwilling or unable to help.7 Debt crises in these countries have often led to severe contraction of local services, cuts in wages and social conflict.

Therefore, SN governments may wish to limit their borrowing by employing a fiscal rule. For example, the government can declare that it will borrow a maximum of X% of the budget; the remaining revenue would have to come from other sources. It can also prevent oil, gas or mineral revenues from being used as collateral on public debt (collateral is an asset that a borrower offers a lender to secure a loan; if the borrower stops making the promised loan payments, the lender can seize the collateral to recoup its losses), thereby increasing the interest rate it has to pay and curbing its incentive to borrow. It may also wish to work with the central government to find solutions that serve both national and local interests, like allowing it to save natural

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resource revenues in boom times or helping it to build capacity to spend resource revenues effectively.

3. Conclusion

Subnational resource-rich governments face three distinct challenges in managing their revenues:

1. Short- to medium-term revenue volatility which can lead to expenditure volatility, poor investment and lower growth
2. The longer-term finite nature of oil, gas and mineral revenues, which can lead to a long boom period followed by regional depression
3. Uncertain revenue flows due to lack of information on revenue sharing and poor forecasting, making development planning and managing volatility difficult in cases when subnational governments are not allowed to save

The first two issues can be addressed by smoothing expenditures and managing surpluses and deficits. This can be done either by saving resource revenues / drawing down on savings or paying down debt / borrowing. Regardless of the choice made, it is useful to rely on medium- to long-term forecasts so that the government can plan how much to save or to borrow in advance. Planning over the medium- to long-term helps prevent short-sighted reactions to temporary rises and falls in oil or mineral revenues.

These forecasts are also a necessary input into development plans, which are particularly important in natural resource-dependent regions that need to plan for life once oil, gas or minerals have been depleted. Development plans should be detailed and focus on investments in high potential sectors, health, education and infrastructure rather than consumption. Together, development planning and expenditure smoothing can help resource-rich subnational governments avoid the wasteful spending and poor development outcomes experienced by so many other resource-rich regions.
Annex 1: Tools for short-, medium- and long-term planning for resource-rich subnational governments

Addressing the challenges that are likely to arise from extractive activities and revenues requires integration of long, medium and annual planning. The following section presents a step-by-step checklist on creating a development plan and establishing fiscal rules and a subnational fund, should that be in the best interest of the region. This section does not propose specific rules nor is it comprehensive.

i. Medium- to long-term development planning (typically focuses on 5 – 25 years)

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Research</th>
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<tr>
<td>• Develop Regional Profile: May include an assessment of current levels of education and health, environmental challenges, the social safety net, transportation networks, water and sanitation, energy sources, agriculture, manufacturing activities, local justice and law enforcement, and government capacity.</td>
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<tr>
<td>• Revenue and Impact Projections: Medium- and long-term projections for extractive activity, revenues, and associated economic activity over the life-cycle of the mine or oil/gas field and the likely scale of volatility. This may necessitate contracts, knowledge of the tax regime, revenue sharing formula, costs of development and production, final production estimates, and price assumptions. Should also include likely social and environmental challenges arising from extraction.</td>
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<tr>
<td>• Prepare for Public Consultations: Identification of key groups that should be involved in participatory planning (e.g. public sector officials; communities affected by extraction; extractive company representatives; local entrepreneurs; local leaders; national government officials) and best venues and format of meetings and public consultations</td>
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| Formulating the Development | Public Consultations: Host consultations on how resource revenues should be managed and spent with key stakeholders. |
## Plan

**Drafting the Development Plan:** The plan should include:
- Clear short-, medium- and long-term objectives
- General medium- to long-term budget framework, including fiscal rules and mechanisms for managing and distributing resource revenues (e.g. savings rule; stabilization fund)
- Opportunities for sustainable development beyond extraction, including possible growth industries
- Constraints facing local businesses and how they will be overcome
- Minimum 5 year fully-costed budget for major expenditure items to be paid through resource revenues, broken down by year
- Maintenance and operations cost estimates for all new infrastructure and plans to ensure maintenance and operations
- Policies to support sustainable growth of local non-extractive businesses and clear timeframe for implementation
- Land use and environmental management plan, especially for areas affected by extraction
- Monitoring and evaluation framework for the development plan

## Monitoring and Oversight of the Plan

- Publish key budget data, budget execution and performance information and evaluations of adherence to the development plan
- Disseminate information to citizens, government and companies through appropriate media (e.g. government website; radio; community meetings)
- Monitor progress towards long-term priority objectives approximately every 3-5 year; involve representatives of the same key groups that were involved in planning in the monitoring or progress

## Incorporation of the Plan into the Annual Budget

- Establish or designate a government department or agency to coordinate the long- or medium-term development plan with the annual budget
- Align the development plan with the annual budget during annual budget preparations
- Ensure that an independent body (e.g. legislature; multi-stakeholder group) publicly reports on adherence to the development plan
### ii. Smoothing expenditure through fiscal rules and saving in a fund

<table>
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<th>Preparation</th>
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<td>• Medium- and long-term projections of oil, gas or mineral revenues over the next 30 years; might require contracts, information on tax regime, inter-governmental transfer formula, production figures, price assumptions and costs of production.</td>
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<td></td>
<td>• Estimate of development plan costs over the 30 years and assessment of government capacity to deliver</td>
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<td></td>
<td>• Public debt sustainability assessment</td>
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<td>• Assessment of need for precautionary savings in case of environmental, social or economic crisis</td>
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<tr>
<th>Development of Fiscal Rules</th>
<th>Objectives</th>
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<td>• Determine objectives of fiscal rules. For example:</td>
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<td>o Stabilize revenues entering the budget to reduce short- and medium-term volatility</td>
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<td>o Save resource revenues and invest them for the benefit of future generations</td>
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<td>o Use resource revenue to pay down government debt</td>
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<td></td>
<td>o Safeguard resource revenues from being used as collateral on public debt</td>
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<td></td>
<td>o Earmark resource revenues for specific purposes like infrastructure, environmental protection, agricultural promotion, health or education</td>
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<td>o Ensure a high degree of transparency and oversight of resource revenues</td>
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**Decide on Fiscal Rules**
- Use research and objectives to legislate fiscal and management rules. For example, decide on:
  - A **deposit rule** (e.g. royalties, bonuses, surface fees, corporate taxes, development and exploration fees from all oil and mining companies are deposited in the fund)
  - A **withdrawal rule and price assumptions**: For example, savings funds should only allow withdrawal once oil or minerals have been depleted or revenues start declining; stabilization funds should accumulate revenues when revenues are high and decrease when revenues are low; the government should legislate a standard oil or mineral price to calculate future revenues in order to determine what are ‘high’ and ‘low’ revenues.
- **An investment rule**: Legislation may include the minimum percentage of the fund that must be invested in low-risk assets like investment grade sovereign debt and maximum percentage of the fund that can be invested in higher-risk assets. Standards should also be set for the maximum percentage of the fund that can be managed by a single manager, independence of financial managers and advisors, and qualifications of financial managers and advisors.

- **A collateral rule**: Encumbering the fund can lower government debt interest rates but may put the government’s savings at risk and encourage over-borrowing. The government may wish to legislate limits on fund encumbrances.

- **Management and accountability**: Legislation should include details on which body or government department will operate the fund and who fund operators are accountable to.

- **Oversight mechanisms**: Legislation could clarify what operations the local legislative body must oversee, such as approval of financial statements. Also, a multi-stakeholder oversight committee could be established to ensure that rules are followed and to oversee oil or mineral revenue management.

- **Reporting requirements**: The fund should undergo an annual independent audit to international standards and the audit should be made public. Also, the legislature or an independent oversight body could submit a public report on oil or mineral revenue management annually.

- **Penalties for non-compliance**: Legislation should clarify penalties, including fines or prison sentences, in cases of non-compliance.

| Implementation of Fiscal Rules | • Establish any funds required by fiscal rules  
|                                | • Hire or transfer government officials to manage or oversee investments, forecast future cash flow and track money flowing in and out of the fund(s)  
|                                | • Produce financial statements and reports  
|                                | • Fully fund activities of oversight bodies |
| Monitoring                    | • Quarterly statements released on financial activities of funds  
|                                | • Annual report by oversight body on activities of the fund and |
adherence to rules
- Public dissemination of reports and statements via media (e.g. websites; radio; community-level meetings)
- Lobbying by oversight bodies to improve performance, if necessary
- Government response to monitoring reports, including potentially through policy adjustments