



Clarity of Roles and Responsibilities

20. Much of resource revenue management hinges on the relationships between the government, national resource companies (NRCs), and international companies. These relationships must be clearly defined for all stages of resource development. Extractive industries can affect the economy or environment at any stage from exploration through to abandonment. Exploration is usually the highest-risk element of any extractive industry project, though there is a difference in this respect between mining and petroleum,²² and substantial expenditure is generally required before a discovery is confirmed. Any government policies intended to encourage investment by international companies or using NRCs at various stages of development should be clear. In the petroleum industry, particular emphasis needs to be placed on clarifying the role of the national oil companies (NOCs). These still produce much of the world's oil and often play a strong policy role relative to the rest of government. This chapter of the Guide examines the legal framework governing these relationships, the special nature of the fiscal regime for resource companies, the broad role of NRCs, including their noncommercial activities, and the clarity of revenue sharing arrangements with lower levels of government.

A. Legal Framework for Resource Revenues 1.2.4/1.2.5

The government's ownership of resources in the ground should be clearly established in law and the power to grant rights to explore, produce, and sell these resources should be well established in laws, regulations, and procedures that cover all stages of resource development.

The basic legal framework

21. Legal title to the nation's resources in the ground is established through the constitution and national laws, as well as subnational laws in some cases. The power to grant rights to explore, produce, and sell these resources should also be clearly established in laws, regulations, and procedures covering all

²²It is more common for mining projects to fail at the development and production stage (something that is highly unusual in petroleum); the ratio of exploration to development outlays tends to be lower in mining.

stages of resource development. The legal framework needs to establish a basis for reconciling the divergent interests of key stakeholder groups, including the state, private investors, owners of surface land rights, parties that can be affected by the social and environmental impact of extractive industries, and civil society. In terms of fiscal transparency, particular emphasis needs to be given to the clarity of the framework for relationships between the government and (private) investors, because many transactions arising from these relationships have fiscal implications. Also, transparency of the legal framework provides an important safeguard for foreign investors and should help ensure effective use of the resources for public benefit. An increasingly important part of the legal framework is the establishment of laws and regulations that give assurance that revenues and accumulated assets are managed transparently through the budget process to achieve national objectives.

22. The constitutional foundation is an important factor, but constitutions differ significantly in the degree to which they

- recognize or guarantee private property rights or prohibit private parties or foreigners from acquiring property rights in general and mineral rights in particular;
- vest the authority to grant mineral or hydrocarbon rights in subnational governments or agencies rather than the national government; and
- vest the authority to regulate specific matters in special agencies in the executive branch (for example, taxation, foreign exchange, employment, or environmental protection) or in the judiciary (settlement of disputes).

23. The legal framework should define which political entity and official has the authority to grant mineral or hydrocarbon rights and regulate their use. In most countries, the sovereign state is the owner of the resource and can grant rights to private parties. Often, this authority is exercised through a sector ministry, which is likely to have power over the application of relevant laws and policies, and the implementation of the government's decisions on the pace of, say, petroleum sector development, by making available areas for exploration and granting licenses. In some countries (such as Azerbaijan and Egypt), licenses are ratified by the legislative branch of the government,²³ although this does not necessarily mean the contracts, or summaries thereof, are disseminated to the public. Given the typically significant macroeconomic impact of hydrocarbons in particular, national policymakers normally prefer to retain authority at the national level (see discussion of subnational government authority below).

24. Modern legal frameworks for resource industries tend to emphasize an environment that is open to domestic and foreign investors, while establishing clear state authority over all stages of development from access to blocks for exploration to production and site abandonment. Two central features of the framework in terms of transparency are (i) avoidance of excessive complexity and opportunities for official discretion in implementation and (ii) encouragement of disclosure of all fiscal and quasi-fiscal arrangements. Best practices for such

²³In *Yemen*, individual production-sharing contracts become law by virtue of a presidential decree.

legislation in this respect are (i) standard agreements and terms for exploration, development, and production, with minimum discretion for officials, though these terms may vary over time; (ii) clear and open licensing procedures; (iii) disputes open to (international) arbitration; and (iv) disclosure of individual agreements and contracts regarding production from a license or contract area. These practices are relatively standard in the advanced economies and are increasingly an area of focus for resource-rich developing and emerging market economies. Application of these principles of transparency will be examined further, first with respect to licensing procedures and then in relation to the fiscal regime.

Licensing procedures

25. Clarity and openness of licensing procedures are fundamental to achieving transparency during subsequent stages of development. Taking the petroleum industry as an example, licensing practices vary in both the complexity of terms and disclosure practices.²⁴ They can be grouped in three broad categories in line with these criteria:

Open bid—fixed terms

26. Open tendering with clearly defined procedures and sealed bids constitutes best practice. A sealed bid license round with fixed terms is used in the United Kingdom, New Zealand, Ireland, Norway, and Australia. The royalties and taxes are not biddable, but set by law. Licenses are awarded on the basis of work program (or sometimes expenditure) bids.²⁵ Timor-Leste, a new petroleum- and gas-producing country, has aimed at establishing internationally competitive open-bid processes at the outset (based on the offered work program). Bids received and final contract awards are disclosed publicly.²⁶ Ultimately the seismic data and drilling data from the successful bidder will also become public.²⁷ The United States uses open bidding for offshore projects, with relatively fixed terms, and publishes the bids and license awards, but it allocates licenses on the basis of signature bonus bidding (that is, a variable term, as discussed below).

Open bid—variable terms

27. Some countries have significant variation in their terms. Licenses may be allocated in a sealed bid process based upon various bid parameters that might include work programs, bonuses, royalty rates, profit oil splits, cost recovery limits, and possibly even tax rates. As a general rule, corporate income tax is legislated and not a bid item. Disclosure of winning bids and contracts is an important element of transparency, although interpretation becomes increasingly complex with the number of bid parameters. Bidding rounds should be open to scrutiny by international observers.

Negotiated deals

28. Negotiated deals are characterized by the lack of sealed bids and firm bid deadline, and, most often, considerable discretion on the part of the

²⁴However, in mining, rights are often subject to a “first come, first served” principle that almost never applies to petroleum licensing.

²⁵In work program bids, companies interested in a particular block will submit a proposal that is typically denominated in terms of the number of wells it will drill and/or the quantity of seismic data it will acquire. Furthermore, the depth of the wells and the nature of the seismic data to be acquired, processed, and interpreted will be included. There is a case to be made, particularly in mining, for allocating areas by minimum expenditure bid, because the nature of a required work program may be more uncertain for a mineral deposit.

²⁶Recent improvements in the bidding processes in *Timor-Leste* as well as in *Angola* and *Nigeria* are summarized in McPherson and MacSearraigh (2007).

²⁷Data acquired by an operator within the scope of its license are made public either when the exploration, development, or production contract terminates or after a certain number of years (8 years in *Australia*, 35 years for *U.S.* operations in the Gulf of Mexico). Multiclient data (acquired by a service company on a risk basis to assist the government in promoting its prospects) are normally marketed by the service company for about 8-10 years, after which they become public.

government agent (e.g., the Ministry of Energy or the NOC). Disclosure of winning bids is also not generally part of the process. Though some terms may be fixed, generally a wide range are subject to negotiation. Companies will make proposals to the government authority, which will ultimately award the licenses to those companies submitting the most competitive proposals. This approach can be fairly efficient but carries a greater risk of corruption. Good practice as far as disclosure is concerned would at least include ex post publication of contract awards and terms. Egypt provides an example of good practice in this respect: all contracts are made public, although licenses may be awarded through either negotiated deals or bid rounds.

29. In the current petroleum industry environment, many situations do not lend themselves to open tendering and competitive bidding. Most of the world's geological basins have matured to the point that significant new discovery expectations are much lower than in earlier eras. International companies, particularly smaller ones, are not in a position to invest in exploration or release ideas about prospects to either licensing authorities or competitors. An ordinary tender for bids in the early stages of exploration of frontier or gas-prone regions (see discussion of natural gas in Box 1), for instance, is thus likely to fail because of the high risks and up-front costs. Negotiated deals are thus common in these situations. Good practice for transparency, however, would require publication of all signed contracts.

30. An often expressed concern with regard to open tendering processes is that both government and companies may lose their competitive advantage by public disclosure of winning contracts. For reasons of commercial confidentiality, therefore, negotiated contracts with nondisclosure clauses are the practice in a number of countries. The reason usually advanced by governments (and to some extent by companies) is that disclosure would erode their bargaining power for future contracts. In practice, however, the contract terms are likely to be widely known within the industry soon after signing. Little by way of strategic advantage thus seems to be lost through publication of contracts. Indeed, it could be argued that the obligation to publish contracts should in fact strengthen the hand of the government in negotiations, because the obligation to disclose the outcome to the legislature and the general public increases pressure on the government to negotiate a good deal.

B. Fiscal Regime

1.2.2/1.2.4

The government's policy framework and legal basis for taxation or production sharing agreements with resource companies should be presented to the public clearly and comprehensively.

31. The high risks, high returns, and prolonged development of extractive industries mean that the fiscal regime for these sectors has many unique features, is generally complex, and, as indicated above, often has significant scope for discretionary arrangements in individual agreements. Ideally, a government will wish to establish a regime that both is attractive to potential investors and gains a fair share of resource rent. The fiscal regime should be

Box 1. Natural Gas and Fiscal Transparency¹

Natural gas has become an increasingly important global energy source. It is attractive from an environmental point of view, demand is foreseen to grow rapidly, and supply has seemed adequate to meet demand for several decades. Nonetheless, its development faces some unique difficulties, quite distinct from crude oil projects, largely because of its heavy dependence on a costly transport infrastructure and the absence of a broad-based market price. Aside from the economic consequences of the nature of gas supply, these features pose particular difficulties for the establishment of a transparent fiscal regime.

Natural gas, which may or may not be associated with crude oil in a reservoir, is transported by pipeline or, as liquefied natural gas (LNG), by tanker. The application of gas-to-liquid (GTL) technology is increasingly seen as a viable alternative to LNG for processing of remote gas. LNG contracts raise different considerations than do pipeline gas contracts, which often involve multilateral negotiations over transit rights. Moreover, the LNG contract chain (production and liquification, transportation, and receiving terminal) can be broken down into independent segments, allowing financing to proceed in stages. In the context of developed market economies in North America and Europe, deregulation aimed at encouraging competition in each segment of the gas contract chain, combined with increased trade of gas, appears to have been relatively successful, resulting in generally lower but also more volatile gas prices.

Much of the world's natural gas reserves are considered "stranded" because remote locations, high transportation costs, and often high political risks make their exploitation commercially not viable. However, prospects of commercial exploitation of these "stranded" resources improve if gas prices rise and technological progress progressively lowers the costs of LNG and GTL plants.

Location, the lumpiness of investments, and the interdependence of segments of the contract chain (for instance, except for the very largest companies, a production contract cannot be securely completed until the tanker transportation has been arranged) have tended to lead to an environment favoring negotiated deals rather than open bidding for contracts.

Where domestic consumption is an important element of natural gas projects, gas consumer prices should be based at least on full cost recovery—and preferably linked to international prices. Otherwise, quasi-fiscal subsidies of domestic use of natural gas will understate government activity, distort energy demand, and limit the attractiveness of the resource to private sector investors.

¹Based largely on Okogu (2002).

clearly and comprehensively set out in government policy statements and incorporated in the resource and tax laws.

32. In the petroleum industry, apart from the substantial amount of production under direct state ownership,²⁸ there are two broad types of fiscal systems used to determine shares of resource rent between the government and investors: (i) tax/royalty systems, in which companies are licensed to explore, exploit, and sell the oil and are subject to a range of tax (as well as non-tax) instruments; and (ii) production-sharing contract (PSC)

²⁸Out of a total production of about 81 million barrels per day in 2005, some 25 million were produced by Middle Eastern OPEC countries (e.g., The *Islamic Republic of Iran, Kuwait, and Saudi Arabia*) under partial or total state ownership. See BP (2006) and Daniel (2002a).

²⁹Resources in the ground are usually the property of the state, except in a few countries (e.g., the *United States*) where private ownership of minerals in the ground is legal. Title to petroleum usually passes to the licensee or contractor at the “delivery point;” under a license in a tax/royalty system the licensee will obtain title to all the petroleum at that point, whereas under a PSC the contractor obtains title to the contractor’s share.

³⁰The use of PSCs is not common in hard rock mining; see Kumar (1995, p. 12).

³¹See Johnston (2004) and Sunley, Baunsgaard, and Simard (2003) for more details on the instruments used under each type of regime. The latter indicate that two-thirds of the 40 developing countries and emerging markets surveyed applied PSCs, generally combined with some form of royalty or income tax.

³²For a summary discussion of petroleum tax regimes see Daniel (2002b).

³³*Norway* provides an example of best practice in this respect. The Ministry of Petroleum provides regular electronic publications including regularly updated fact sheets on the Norwegian petroleum sector covering the regulatory and fiscal framework (see <http://www.regjeringen.no/en/ministries/oed.html?id=750>). The tax/royalty regime builds on the normal corporation tax (in 2003, 28 percent) and adds a special tax of 50 percent. The policy on depreciation and the deductions allowed in calculating ordinary and special taxes are clearly specified. In addition, companies pay royalties on production (but this is being phased out), area fees, and carbon tax. The government also receives dividend income from equity holdings (in most petroleum fields and transport systems on the continental shelf).

arrangements, whereby companies are contracted to extract and develop the resource in return for a share of the production.²⁹ A number of other fiscal arrangements may apply to either regime. The PSCs may also embody some tax or royalty elements.³⁰ And even under a PSC system, it is common for the contractor to pay corporate income tax under general tax legislation, either directly, or indirectly through a mechanism involving the state partner (usually the NOC). This practice has evolved largely in response to companies’ desire to receive foreign tax credits in their home jurisdictions. Either system can be designed to achieve identical ends with regard to revenue shares and risk-reward mix, and a fiscal regime may incorporate aspects of both systems. Although the greatest part of world oil production does not occur under PSCs, these have become the main system of choice for many developing countries, particularly those opening up new areas or remodeling their arrangements.³¹

Tax or royalty systems

33. Industrialized countries have tended to rely more on tax or royalty systems. As a rule, these countries build on the basic corporation tax regime and so have a solid basis in general taxation law. Each type of system, however, poses transparency challenges, and the nature of the investment makes resource taxation complex. The main elements of tax or royalty regimes are described below. Practical approaches to assessing government or industry “take,” which aim at providing a summary indicator encompassing many aspects of the fiscal regime in the petroleum industry, are described in Box 2.

34. The normal range of tax instruments can be applied to resource industries—and it is vital that the definition of the industry fiscal regime cover all instruments actually applied. Profitability and risk considerations will likely lead to special rates and an industry-specific, multi-instrument regime designed to meet the needs of government and the industry. In principle, the policies underlying such a regime should be stated openly to the public and the tax treatment of the industry should be subject to normal budgetary and public scrutiny. In practice, regimes cover a wide spectrum. At one end, as envisaged by Cordes (1995), resource companies are subject to the same regime as other industries except for some form of additional profits tax (such as a “resource rent tax”) geared to high profitability and some form of royalty equivalent to ensure a minimum revenue flow. At the other extreme, various instruments and rates may be used in a case-by-case approach that attempts to optimize government returns relative to risks. The more complex and discretionary the system, the more difficult it will be to define the basic fiscal regime and achieve better transparency.³²

35. At the best practice end of the spectrum, it should be possible to define the resource industry tax baseline regime as those normal taxes applied to all corporations, plus a few policy variations (royalties, additional profit tax) that form an integral part of the regime.³³ Any special concessions beyond these should be identified and reported as tax expen-

Box 2. The Fiscal Regime and Government “Take”

Because of the complexity of country-specific fiscal regimes, a common approach to analyzing production sharing contracts and other arrangements is to prepare a summary estimate of the projected overall division of rents between company and government resulting from all instruments. This is often referred to as the government “take” (see Johnston, 2004; and Kumar, 1995). Effectively, the estimation collapses all of the rent extraction mechanisms into the equivalent of a single cashflow-based tax taken over the life of the project.

Particularly for frontier regions following an initial discovery, very little information is generally available, and both government and company negotiators will necessarily build a variety of risk assumptions into the projections. After a contract is signed, however, provided that risks are clearly stated, an overall summary of the projections and relative take could be an important element of disclosure. Indeed, without a summary overview, disclosure of contract terms is likely to be quite difficult to interpret. Data on government take across countries and projects are relatively readily available in the industry, but their potential significance for transparency has been underemphasized.

A summary at this level does, however, have obvious limitations, as stressed by Johnston (2004). Among other things, a single statistic cannot capture the differing share of risks that may emerge from any particular fiscal regime, and coverage may not be comprehensive (e.g., quasi-fiscal activities such as the provision of social services through resource companies are often not included). Moreover, such data do not take account of differences in the structure of the fiscal regime (such as the presence or absence of ring-fencing) and the availability of home country tax credits to foreign investors.

Better standardization of methodology would seem necessary to improve transparency. In this regard, the following should be considered:

- Assumptions underlying the projections and estimates should be clearly stated.
- Sensitivity of results to changes in key variables (e.g., oil price) should be shown.
- Take should be shown in terms of discounted as well as undiscounted cash flow.
- The effective royalty rate (or the minimum share the government may expect in any given accounting period) should be estimated.
- Ex post take estimates as well as ex ante take projections should be made available to the general public.

Disclosure of take analysis results by company or field will encounter various legal barriers at the company level. Thus, for both technical and administrative reasons, implementation of such reforms may be slow. However, where take projections and estimates can be easily prepared, their disclosure could be a good *prima facie* indicator of transparency. Take projections and estimates, it should nonetheless be emphasized, say nothing about the relative profitability of fields and should not be interpreted as setting a negotiating standard. Rather, making such data available to the general public could form one useful element of overall disclosure, which, along with other measures, should help improve the transparency of the fiscal regime.

ditures.³⁴ For many countries, however, the regime itself is inherently complex and discretionary. The overriding transparency objective in such systems should be to move toward a clear definition of the fiscal regime, as well as reducing discretionary options.

PSCs

36. In principle, and by definition, PSCs are individually designed and the general underlying policies may be less clearly described in government policy statements or laws. As a practical matter, however, governments (or NOCs) usually make contracts under powers granted by general petroleum legislation and frequently negotiate and base their contracts on some form of model contract.³⁵ It is possible for parameters in such contracts to remain undefined and thus open for bidding or negotiation, and many important elements of contract language are subject to case-by-case adjustment. Publication of model contracts may thus be of limited value in defining the fiscal regime, unless governed by clear policy statements or limitations in legislation regarding the variability of contracts. Publication of actual contracts will provide more definitive information, subject to the constraints outlined under *licensing procedures* above.

37. The main parameters of PSCs are the *cost oil* retained by the contractor to cover cost; *profit oil*, which covers the remaining production; and an agreed formula for dividing profit oil between the government (and/or NOC) and the contractor. The latter may be fixed or may be progressive according to production, price, or profitability criteria. Policy transparency would require that, where PSCs are the central instrument of the fiscal regime, all of the key PSC parameters should be available to the public in the same way as tax rates, exemptions, and deductions.

Other elements of the regime

38. Other elements that may be part of the overall policy framework include ring-fencing, indirect taxes, various forms of bonus and other nontax payments, fiscal stability clauses, and equity participation. These elements are discussed below.

Ring-fencing

39. Ring-fencing (a limitation on taxpayers' ability to consolidate income or deductions for tax purposes across different activities, projects, or license areas) has important implications for revenue flows and investor incentives. Its absence can postpone government revenue flows, because deductions from new projects can be offset against earnings from current production. But ring-fencing, in appropriate circumstances, can also help level the playing field for new entrants to a maturing resource project. In the longer term, absence of ring-fencing may yield higher government revenue by encouraging more exploration and development, at the cost of some additional risk

³⁴See the general discussion of tax expenditures in the Manual. Defining the tax baseline for resource revenues is particularly difficult owing to the special tax arrangements (e.g., additional profit tax, royalties). It may therefore be best to consider the sector separately with a unique baseline. On this basis, tax deductibility of mandated social and environmental expenses will likely constitute the major element of state support through the tax system.

³⁵*Indonesia* pioneered the use of PSCs in the oil sector, on the basis of a model contract and certain economic parameters biddable or negotiable. Indonesian PSCs have not changed significantly from one case to another, but following periodic revisions of the fiscal regime, different "generations" of model contracts have evolved. See discussion of this issue in *Indonesia* Fiscal ROSC, 2006, paragraph 11.

to government revenue and some possible postponement of early revenues. From a transparency point of view, it is important that the government policies in this regard are clearly stated and that the system is applied uniformly and openly.

Indirect taxes

40. Indirect taxes may also play an important role in the fiscal regime. Resource sectors are often treated differently from other economic activities, either because of their special nature or as a fiscal incentive to attract investors. Indirect taxes provide an important source of early revenue to the government, but by the same token exemptions are also used as an investment incentive. For fiscal transparency purposes, the costs of any incentives provided through indirect tax exemptions (including import tariffs on intermediate inputs) should be clearly recognized, whether as part of the overall fiscal regime or separately calculated as tax expenditures.

41. Value-added tax (VAT) refunds present special problems. As Sunley, Baunsgaard, and Simard (2003) point out, zero-rating exports under a destination-based VAT will lead to continuous net refunding to exporters, which puts pressure on weak tax administrations, particularly in periods of high investment. VAT exemptions for imported capital goods and other inputs to the industry are therefore used by a number of countries to avoid the administrative burden of refunding, although it is difficult, especially for weak tax administrations, to separate inputs used by the resource industry from those used in other sectors of the economy.³⁶

Bonuses and non-tax payments

42. Various types of bonus payment are used by many countries to collect early revenue from a project with little administrative effort. As indicated earlier, signature bonuses can be a key element of the fiscal regime at the licensing stage and are an effective tool for generating revenue early on. Where projects are high-risk and license deals are primarily negotiated, however, such payments are likely to be implicitly offset by concessions elsewhere (a trade-off that may well be justified in terms of government risk management). Bonuses paid prior to project development thus may have some of the characteristics of oil-backed loans, with an implicit repayment through future favorable tax treatment. Disclosure of contract terms in some form is therefore a necessary part of transparency. Various other forms of non-tax instruments (such as license, rental, or lease fees) are also used, but generally these appear to be relatively minor components of the overall fiscal regime.

Fiscal stability clauses

43. Investors naturally want to get as much assurance as possible that they will not be subject to unfavorable changes in the fiscal regime. To meet this requirement, many project agreements include fiscal stability clauses. There

³⁶Sunley, Baunsgaard, and Simard (2003) and others also outlined the special problems faced in the countries of the Commonwealth of Independent States, which used to apply an origin-based VAT for oil and gas trade within the Commonwealth of Independent States but a destination-based VAT for other sectors. However, changes to these practices are under consideration.

are various forms of such clauses, such as “freezing” the tax system at the time of the agreement or guaranteeing the investor take by compensatory adjustments to tax changes (in production shares, for example). On the one hand, such clauses can be administratively cumbersome and limit tax policy flexibility, although fiscal stability provisions can be designed to minimize the general tax policy impact. They also impair the legislature’s normal authority to pass fiscal legislation. On the other hand, they may be necessary in high-risk environments and may increase the overall government take if they reduce investor risk premium. They may also make tougher policies elsewhere in the regime more acceptable than otherwise. At any rate, both the existence of such clauses and their potential implications should be clearly explained to the public.

C. Authority over Revenue Flows and Borrowing **1.2.2**

Fiscal authority over resource-related revenue and borrowing should be clearly specified in the law. Legislation should include a requirement for full disclosure of all resource-related revenue, loan receipts and liabilities, and asset holdings.

44. The budget process should handle resource-related revenues similarly to other government revenues, and any law governing the receipt of such revenues and appropriation for spending should be consistent with the law governing the government budget. In practice, it is often the case that laws governing company payments are first executed outside the finance ministry. For example, a royalty is usually imposed by petroleum or mining legislation and collected by the ministry or agency responsible for the legislation; similarly, an oil PSC is most often made either with the petroleum ministry or with the NOC. The ministry responsible for fiscal policy, however, should have a guiding influence on the level of such payments and the design of the overall fiscal regime. Moreover, resource industry laws should be consistent with general budget and tax laws.

45. To the extent that resource revenue payments are received by an NRC, a resource-related fund, or local governments, the rationale for such arrangements should be made clear. Good practice is that all such revenues should flow to the government budget before being appropriated for spending purposes.

46. Rights to borrow for public purposes should be under the authority of the finance ministry on behalf of the government. Receipt of such borrowings should be credited to a bank account under the control of the finance ministry or its treasury, with the balances credited, liabilities incurred, and terms of loans being fully disclosed to the public. The basis for transparency in this regard is, first, an adequate legal framework that specifies authority to borrow clearly and requires adequate disclosure and oversight mechanisms. Second, the legal framework must be adequately observed and oversight bodies should have adequate authority and capacity to administer the law. Borrowing or collateralization by an NRC should be similarly transparent, given the likely

significant fiscal implications of such borrowings. However, in a number of resource-rich developing countries, practice often departs substantially from such standards: loans may be made on the basis of future production collateral, generally on a negotiated rather than open tender basis; the terms of loans are often not fully available to the public; and the authority for such borrowing may not be subject to the usual rules of financial management and oversight by the finance ministry and the national audit office.

47. Resource-related asset holdings should also be subject to clear rules for disclosure, regardless of whether they are held by the finance ministry, a separate resource fund (see below), or any other entity. Equally important, these assets should be considered as part of government's overall financial assets, with changes considered as part of the overall fiscal balance (see Chapter III). To the extent that a full government balance sheet is maintained, the assets should be reported as part of the consolidated government balance sheet.³⁷

D. Equity Participation

1.1.5/1.2.4

Government involvement in the resource sector through equity participation should be fully disclosed and the implications explained to the public.

48. As indicated above, direct government equity participation in projects to develop resource sectors is an important element of the fiscal regime in a number of resource-rich countries. Sunley, Baunsgaard, and Simard (2003) indicate that 18 of the 40 emerging or developing countries covered by their survey participated, or had the right to participate, directly in resource ventures. Maximum equity stakes in these countries ranged from 5 to 50 percent. Governments can acquire equity under normal commercial terms or through various forms of concessionary purchase, including tax swapped for equity and so-called "free" equity. A common way is through what is called a "carry"—where the government—"carried" equity interest is financed by private investors, but, after commerciality has been established, the government contributes to sunk project costs to a varying extent from its share of the profits or profit oil.³⁸ In addition, some systems allow the government an option to buy into a project at the time of discovery. Generally, however, favorable terms for the government's participation involve some form of offsetting reduction elsewhere in the fiscal regime. All such concessions and their costs should be disclosed as completely as possible.

49. If, as is commonly the case, the government has the right to take up a working interest through the NRC (in some cases paid by the NRC share of profit oil) or the resource ministry, there should be full disclosure of the form of payment and ownership arrangement.³⁹

50. Where the bulk of production is under direct state control, payments to the budget would occur as taxes and dividends or as other forms of income, including the proceeds from direct domestic and external sales of oil or any other resource products. Good corporate governance practice would require that NRC accounts statements be available to the public and the policy on dividends be disclosed. As discussed further below, however, few NRCs cur-

³⁷These recommended practices are in line with the requirements under the *Government Finance Statistics Manual 2001* (IMF, 2001a).

³⁸Daniel (1995) notes that carried interest is, under certain assumptions, fiscally equivalent to a resource rent tax and, more generally, describes the fiscal equivalence of various forms of state equity participation and production sharing arrangements.

³⁹In a few countries, the working interest share granted to the "government" is actually held by individuals (typically government officials). Such a delegation appears prima facie inherently transparent, and the rationale for such practices should be fully disclosed.

rently meet these standards. Compliance with EITI would require considerably more effort to apply these.

E. National Resource Companies

1.1.4/1.1.5

Ownership structures of national resource companies and their fiscal role vis-à-vis the resource sector ministry and the finance ministry should be clearly defined.

Commercial responsibilities should be clearly distinguished from policy, regulatory, and social obligations.

51. NRCs have become increasingly important players, especially in the oil sector.⁴⁰ Government ownership and control of resources gained increasing importance in the 1970s, with an initial focus on nationalization and control of upstream activities. Subsequently, governments of both oil-exporting and oil-importing countries began creating national companies to promote downstream activity; one key aim of this was to gain control over petroleum retail pricing. This led to a rapid expansion of national companies' role in setting petroleum policy, including the adoption of a variety of noncommercial policies usually associated with the government. The ability of these companies to attract available local (as well as international) expertise, and the greater flexibility of company structures, led in many countries to a corresponding decline in the quality and authority of traditional general government. Although in more recent years there has been a critical reevaluation of the role of NOCs in recognition of their manifold weaknesses, they continue to have a powerful influence on policy in many developing and transition countries.⁴¹ As discussed under practice IIC, there may be a case in some countries for considering a broad public sector balance including the NRC as a key indicator of fiscal policy.

52. Two issues that have a direct bearing on fiscal transparency for all NRCs are discussed in McPherson (2003):

- Commercial and noncommercial activities should be clearly separated. Poor commercial performance may in part be attributed to poor governance and lack of competition, but the companies' substantial role in promoting a variety of noncommercial/quasi-fiscal activities (QFAs) reduces managerial accountability for both types of activity. Provision of noncommercial services is primarily a government responsibility, and clarity of fiscal policy requires that the extent of such activities be overseen by the finance ministry.⁴²
- Policy and regulatory roles vis-à-vis the sectoral ministry and the finance ministry should be clearly defined. These problems are minimized when these companies focus primarily on commercial activities.

53. Substantial reform of management of NRCs is needed to address these issues adequately. At the same time, better disclosure of the ownership structures of these companies and their subsidiaries is a central element

⁴⁰For example, McPherson (2003) notes that NOCs control 90 percent of world oil reserves and account for 73 percent of production.

⁴¹See McPherson (2003).

⁴²For transparency, best practice would be to eliminate QFAs and provide any subsidies directly in the budget. Good practice for fiscal transparency requires at least a clear description of QFAs with an explanation of their role in overall fiscal policy. Although the Norwegian model described below offers one example of clarity, it is not suggested that this is the only possible transparent arrangement. Specific examples of QFAs carried out by NRCs are discussed in the next section.

of corporate governance.⁴³ Such disclosures should include, if applicable, share participation of government officials and more general governance issues (e.g., composition of board, audit practices). The government's policy and administrative roles usually need to be more clearly defined as well. Addressing capacity and institutional constraints in these areas is critical for reforming resource transparency and management in developing countries. The "Norwegian Trinity Model" provides one model of a clear definition of roles.⁴⁴ In many ways, policy and administrative reforms are necessary precursors to implementing improvements to many other elements of transparency and resource management, because most such improvements rely on establishing clear lines of accountability.

F. Quasi-Fiscal Activities of Resource Companies 1.1.4/1.1.5

Arrangements whereby international or national resource companies undertake social or environmental expenditure or provide subsidies to producers or consumers without explicit budget support should be clearly defined and described in the budget documents.

Economic and social QFAs

54. State-owned enterprises and government institutions as well as the central bank can undertake quasi-fiscal activities.⁴⁵ The existence of QFAs means that the budget gives a misleading picture of the actual extent of fiscal activity and, as discussed above, leads to a blurring of responsibility between the government and state-owned enterprises. These issues are discussed extensively in the Manual but they are particularly relevant for resource-rich countries in which government responsibilities are transferred to sector agencies where both financial and managerial resources are concentrated.⁴⁶ With respect to resource sectors, the main types of QFAs include the following:

- **Energy QFAs:** requirements for NRCs to provide products (particularly energy) at less than cost recovery or market price for domestic consumption;
- **Public expenditure QFAs:** requirements for NRCs or international companies to provide social services or other public goods normally provided by general government;
- **Employment QFAs:** provision of employment in NRCs or related activities that go beyond what would be done if companies were run on a purely commercial basis; and
- **Borrowing QFAs:** use of company leverage to borrow on behalf of government.

55. Energy QFAs cause market distortions and understate the size of government activity and the size of the budget deficit. In particular, providing energy at low prices represents an implicit, untargeted subsidy that invites overconsump-

⁴³See discussion of OECD Principles of Corporate Governance in the Manual.

⁴⁴Policy and licensing as well as petroleum taxation and related fiscal issues are the responsibility of the government of *Norway* (e.g., Ministry of Petroleum or Ministry of Finance). The Petroleum Directorate provides advice to the Ministry of Petroleum (to which it reports) on technical matters, manages technical data, and enforces technical regulations. The NOC (Statoil) focuses on commercial operations, a role recently reinforced through partial privatization. See McPherson (2003, p. 200).

⁴⁵A broad definition would include all operations that could in principle be duplicated by specific budgetary measures in the form of an explicit subsidy or direct expenditure. Typical QFAs with critical macroeconomic significance include multiple exchange rate regimes, the provision of exchange rate guarantees, nontariff trade barriers, credit rationing and directed lending at below-market interest rates, and the provision of goods and services by state-owned enterprises at below-market or cost recovery prices.

⁴⁶Statements on quasi-fiscal activities are essential for fiscal transparency. These statements should, at a minimum, indicate the purpose of each quasi-fiscal activity, its duration, and the intended beneficiaries. In addition, there should be at least some assessment of the potential fiscal significance and, where possible, quantification. See Chapters I and III of the Manual for further details.

tion and waste by households, enterprises, and other users, with a potentially large adverse environmental impact. Maintaining such subsidies leads to a misallocation of resources and risks the creation of an unsustainable dependence on continuing low energy prices. Such QFAs are prevalent in many energy-rich countries. The previous section noted additional consequences in terms of reducing managerial accountability for both commercial and noncommercial activities.

56. Energy QFAs come in various forms and may involve international companies as well as NRCs. Generally, most important among these is, as indicated above, the provision of petroleum or other energy products through state-owned enterprises at nonmarket prices that, in some cases, do not cover even operating costs.⁴⁷ Sometimes, de facto subsidies to consumers are even higher if energy parastatals tolerate the accrual of arrears by consumers.⁴⁸ In the oil sector, a particular type of QFAs are what is called “Domestic Market Obligations” (DMOs). These often require (foreign) oil companies to sell a certain share of crude oil production domestically below market price. Such arrangements should be disclosed as part of the government’s energy policy, which often also includes administrative pricing rules for petroleum and other products. Energy QFAs owing to low prices and the tolerance of arrears can be very large. For example, implicit subsidies of petroleum products because of unduly low prices were estimated at 3.5 percent of GDP on average in 1999 for a group of 15 oil-exporting countries, with wide variations across countries. Some of the highest oil-related implicit subsidies were measured for the Islamic Republic of Iran (17 percent of GDP in 1999–2001) and Azerbaijan (more than 20 percent of GDP in 2000).⁴⁹

57. Public expenditure QFAs involve national resource companies or international companies taking responsibility for services or public goods that are normally provided by general government. This may have been justified by government on the grounds that these activities represent a desirable partnership between companies and government to serve the needs of society. In some cases, it is argued that a company is better placed to provide services to, say, remote communities than is the government.⁵⁰ Moreover, companies themselves may feel that they enjoy benefits through better reception by the communities affected by the resource development.⁵¹ Such activities, however, are rarely reported clearly or comprehensively. The extent of government fiscal activity is thereby understated, which may also generate inefficiencies.

58. The main transparency point is that the extent of such activities and their justification should be clearly explained in the budget process. Budget documents should explain clearly the nature of the expenditures and how costs are shared between the government and companies—including through the tax treatment of such expenses.⁵² Coverage and explanations of QFAs in budget documents should be nondiscriminatory, that is, relevant activities should be covered regardless of company ownership (private or state-owned).

59. The financing and provision of social services (e.g., local schools or health clinics), infrastructure, or other services for local communities may or may not be fixed in contracts between the government and individual companies. Such spending may be beneficial from a development perspective because it helps fight poverty and improve infrastructure, especially in regions and sec-

⁴⁷Analytically, an important distinction needs to be made between short-run marginal costs and long-run marginal costs (i.e., including investment). Ideally, tariffs should be determined on the basis of the latter.

⁴⁸In the past, this was a common feature in a number of energy-rich former Soviet Union countries. For detailed analyses of energy sector quasi-fiscal activities stemming from implicit subsidization of oil and other energy products, see, for example, Petri, Taube, and Tsyvinski (2003).

⁴⁹See Gupta and others (2003); Petri, Taube, and Tsyvinski (2003); and Taube (2001).

⁵⁰This was, for instance, one reason why *Angola’s* Sonangol took over the responsibility for various economic, social, and financial activities from the central government during *Angola’s* protracted civil war.

⁵¹Technically, a QFA only exists if the company is acting at the direction of government. In some cases, resource companies may decide to provide a noncommercial service or good simply for purchase of goodwill in the local community. Even if this is the case, the amount spent for such activities should be identified in the company’s financial reports and also in the budget to reveal the full expenditure for the public good or service in question.

(continues on next page)

tors where government implementation capacities are weak. However, it may also result in direct costs for the government (e.g., recurrent costs after the end of the mining project) and could distort overall public spending priorities.

60. To the extent that spending for such programs is cost recoverable or tax deductible by resource companies, the government is burdened with part of the costs for these activities. For instance, if 40 percent of all spending on social and community programs by a resource company project is tax deductible, the government effectively and implicitly subsidizes these activities to this extent through forgone revenue.⁵³ A case in point is the “Infrastructure Tax Credit Scheme” for mining companies in Papua New Guinea. In recognition of local governments’ limited capacity to implement social service and infrastructure projects, it was agreed that licensed mining companies would finance and implement development projects (e.g., schools, health facilities, roads) up to a maximum amount (0.75 percent of the value of gross sales) and receive in exchange an income tax credit for these expenses.

61. Employment QFAs are similar in principle but involve less easily defined costs and social aims. A fairly common example is the provision of employment opportunities in NRCs over and above what would seem required for commercially run enterprises. The requirement for national or international companies to provide training to local counterparts, hiring quotas, and local content requirements can also be considered quasi-fiscal activities because they result in higher costs and hidden taxes for companies than under a pure market environment.⁵⁴

62. Borrowing QFAs⁵⁵ are equally an extension of NRC fiscal authority outside normal channels. The costs, however, are in terms of diffusion of financial management authority and hard to quantify. Such arrangements signify a need to clarify the relative roles of the national resource company and the finance ministry.

Environmental and site abandonment issues

63. Extractive industries invariably have a significant impact on the environment. Environmental expenses differ from QFAs in that they are seen as a partial obligation of the resource companies because they are fundamentally linked to the production process. Nonetheless, at least part of these expenses will be tax deductible and hence the costs partially borne by the state; it is important that the level of expenditure on environmental protection be captured in fiscal documents and publicly reported alongside other public spending. Increasingly, these concerns are being built into general and industry-specific legislation as well as individual contracts. Whereas, a decade ago, oil PSCs often did not include proper site restoration and cleanup provisions, these are becoming standard features.

64. In many respects, however, such issues are but one facet of the overall negotiations between governments and companies. Ownership of the resource ultimately generally rests with the government, and from a purely commercial company perspective, the cost of protecting the environment or restoring the site is both a government responsibility and part of the overall cost structure. For any company, this component must therefore be included

⁵²On this point, two kinds of relationship can be distinguished: (1) it may be agreed that the provision of, say, schools and health facilities for company employees in remote areas is a necessary business expense and tax deductible; or (2) government and companies may agree as a matter of policy that companies should provide certain social services normally considered a government responsibility, in which case either costs are tax deductible or a tax credit is given (as in the case of *Papua New Guinea*, described in paragraph 60). Both types of arrangement should be reported as part of overall fiscal activity. In the second case, revenue forgone by government should be estimated and reported as a tax expenditure in the budget documents.

⁵³Best practice for transparency would require the budget to include a subsidy to the company to cover the full cost of the mandated expenditure. However, if the expenditure is fully or partially offset by a reduced tax liability, it would be important for the budget to describe the full nature of the arrangement, including the full cost of the QFA and the amount of revenue forgone because of a tax deduction or other exemption (i.e., the associated element of tax expenditure).

⁵⁴For example, as part of the development of the Indonesian oil sector, a Utilization of Expertise and Skill Development Fund was established with the objective of encouraging local hiring. The fund is financed with obligatory payments of \$100/month per expatriate employee.

⁵⁵McPherson (2003) cites *Angola’s* Sonangol as an example. The Global Witness report “Time for Transparency” also provides examples from other countries (Global Witness, 2004).

in overall project costs and thus taken into account in profit calculations. The question is how such costs are shared between the company and the government, through cost recovery or tax deduction, and over what period of time. Socially and environmentally, it is, of course, essential that such costs be clearly recognized and reported and that steps to address the issues be built systematically into individual project design—with appropriate and efficient sharing of costs between the government and companies. In advanced countries, these factors are reflected in the legislation and applied through the general tax system and specific project agreements,⁵⁶ though even in such countries, there is often scope to improve reporting on implicit state support of environmental spending through the tax system.⁵⁷

⁵⁶Norway again provides a good example of a comprehensive approach. The Norwegian government cooperates closely with industry to ensure development is associated with environmental protection at all stages of development. Norway accepts its obligations under the Kyoto protocol and is applying a range of instruments accordingly. See http://www.regjeringen.no/upload/kilde/oed/bro/2005/0004/ddd/pdfv/243848-miljo_05_engelsk.pdf.

⁵⁷Contract provisions often allow for the accrual of an abandonment fund during the life of a project. Responsibility for site restoration should be clearly specified, and for transparency purposes contracts should specify the starting point (e.g., after 30 percent depletion), time profile of payments, and accrual mechanism (e.g., through an escrow account) and make provision for reassessment of the restoration liability. These practices are increasingly recognized as necessary company costs of resource extraction.

⁵⁸For example, in Nigeria the state and local governments are not required to report on budgets and their execution to the federal government. Data on subnational government activities are available only through an annual survey carried out by the Central Bank of Nigeria, and the quality of these data is limited.

⁵⁹Related to this point, a weak government increases the difficulty of developing a coordinated macroeconomic policy for stabilization and savings.

G. Subnational Government and Resource Revenues

1.1.3

Arrangements to assign or share resource revenues between central and subnational levels of government should be well defined and explicitly reflect national fiscal policy and macroeconomic objectives.

65. The assignment of taxation powers and expenditure responsibilities to central and subnational governments should be based on stable principles and agreed-upon formulas, which should be clearly and transparently formulated and implemented as legally prescribed, in an open and consistent manner. These general requirements are particularly important in large, diverse, decentralized countries that have sizable oil or other natural resource revenues. At the same time, however, when subnational jurisdictions are fiscally important and enjoy a large degree of independence from the central government, it is a considerable challenge to establish a sound and transparent subnational revenue sharing system. This challenge is much greater in such countries when state and local government fiscal operations do not provide good fiscal data regularly and in a timely manner.⁵⁸

Economic and fiscal policy considerations

66. Economic theory suggests a number of reservations with regard to giving oil or other large natural resource revenue to local governments, in particular if combined with resource-related taxation powers. In practice, however, resource revenues are playing an increasing role in financing subnational governments worldwide. Assigning revenue to subnational governments is generally considered likely to improve accountability and the quality of spending because local governments can determine better than central governments the needs and requirements of their populations. However, the “resource curse” arguments advanced at a national level (see Overview) are likely to apply equally, if not more strongly, to weak subnational governments. From a macroeconomic and sustainability perspective, the most important argument is that a central government will be able to exercise the needed authority to strictly control spending and save windfall revenue.⁵⁹ Another

argument in support of natural resource revenue accrual at the central government level is the need for policy coherence; because energy sector policies are usually under the jurisdiction of the central government, government tax and expenditure policies related to natural resources should also be determined at this level.

67. However, despite such arguments, controls over resource revenue are often decentralized. In some countries, subnational governments own the natural resources.⁶⁰ In others, constitutions or basic legislation require that natural resource revenue be shared with subnational governments, often reflecting political economy considerations.⁶¹ Measures other than direct revenue sharing can be taken to balance centralization of resource revenue collection. For example, nonresource taxes can be assigned to subnational governments to provide them with some autonomy. Fiscal management and equity factors also generally require that a transfer system be put in place to address vertical imbalances between the central and local governments as well as horizontal imbalances across local governments (Ahmad and Mottu, 2003).

68. Because natural resources tend to be distributed highly unevenly across regions, it is difficult to base horizontal revenue allocation on the “origin principle,” as this would intensify regional imbalances. The following examples illustrate these difficulties. In Indonesia, implementing this principle would imply that five provinces would likely receive 80 percent of the local share in oil and gas revenue, whereas the remaining 25 provinces would each receive very little.⁶² In Argentina, three provinces (with only 3 percent of the population) produce nearly three-fourths of total oil output. Some similar factors apply in Russia, where the five oil-richest regions have only 6 percent of the population but collect over 50 percent of all subnational government revenue related to natural resources.⁶³ In this last case in 2006, however, about 96 percent of oil revenue was assigned to the federal government. The case for equalization transfers into nonresource-producing regions needs to be examined in the context of the overall assignment of oil revenues in each country.⁶⁴

69. Existing revenue sharing systems can be categorized within a spectrum ranging from full centralization to full decentralization, with a variety of tax and revenue-sharing arrangements in between.⁶⁵ Also, revenue sharing can be applied (i) across taxes (e.g., assignment of all royalties to provinces in Papua New Guinea), (ii) on the basis of providing a share of all resource-related revenue, or (iii) on the basis of expenditure needs of local governments. Whereas smaller countries tend to fully centralize oil revenue, larger countries, especially those with a federal structure, typically adopt some form of subnational revenue-sharing arrangement (e.g., Colombia, Ecuador, Indonesia, Kazakhstan, Mexico, Nigeria, Russia, and Venezuela).⁶⁶ Mexico has established a revenue-sharing formula that has a broader revenue base, that is, it includes not only natural resource revenue sources but also indirect taxes.

70. Generally, there appears to be a trend toward an intensified use of subnational revenue sharing, as is demonstrated for example in Indonesia, which changed from a centralized model to a decentralized revenue-sharing model in 2001. Other countries, including Papua New Guinea, the Philippines, and Nigeria, also have subnational revenue-sharing systems. In Bolivia, there is

⁶⁰For instance, *Australia*, *Canada*, and the *United States*, where provinces or states and (in some cases) private landowners can possess natural resources. In these countries, strong measures of control and transparent practices at the subnational level have contributed to the successful management of resource revenues.

⁶¹In a number of countries, oil-producing regions have pushed for independence over this issue, which at times has resulted in unrest, war, and secession (e.g., the Biafra war in *Nigeria*, Aceh in *Indonesia*). Following these conflicts and continued tension, both the Nigerian and Indonesian central governments agreed to establish natural resource revenue sharing arrangements. *Nigeria* now distributes 13 percent of oil revenue to oil-producing states. Indonesia allocates 55 percent of oil revenue and 40 percent of gas revenue to Aceh province. In *Chad*, 5 percent of oil revenue is assigned to oil-producing regions.

⁶²In practice, a variety of factors are taken into account in *Indonesia* within a broad system of intergovernmental transfers. Revenues collected by the central government on account of property tax, personal income tax, and natural resources (e.g., oil, gas, forestry, and mining) are shared with subnational governments according to specified rates. See *Indonesia* Fiscal ROSC, 2006, paragraphs 11 and 12, for further details and discussion of issues associated with resource revenue sharing.

⁶³Martinez-Vazquez and Boex (2000).

⁶⁴Ahmad and Mansoor (2002) describe such a horizontal equalization scheme in *Indonesia*.

⁶⁵For oil-producing countries, these systems are analyzed in detail by Ahmad and Mottu (2003).

(continued on next page)

pressure to reverse changes to the hydrocarbon revenue allocation system, which were designed to give a higher revenue allocation to subnational governments, especially provinces that produce oil and gas.

Fiscal transparency guidelines

71. Clear rules and principles should guide whatever subnational revenue-sharing arrangement is chosen. Moreover, tax powers, revenue-sharing arrangements, and expenditure responsibilities should be based on stable principles and agreed formulas that should be developed and exercised in an open and consistent manner. These principles should include not only understandings between the various levels of government on the original arrangement, but also rules and procedures for modifying it. Regarding the latter, Brosio (2003) has suggested the sound rule that as long as renegotiations of the subnational revenue-sharing system take place, the original system continues to be in place and no party holding a stake should have a veto power to stop the existing system from functioning.

⁶⁶There is also the special case of the “full decentralization model” in the *United Arab Emirates*. Oil revenue accrues to the individual emirates and is then upwardly shared with the UAE government based on a negotiated formula. *Canada* and the *United States* share revenue bases between provinces and states on the one hand and the federal government on the other hand.