ANNEX C: WORLD BANK EXPERIENCE

1. Introduction

Background and Context

In resource-abundant countries, the extractive industries should be expected to play a major role in support of sustainable development. They can be an important source of government revenues and foreign exchange and generate employment in otherwise economically neglected areas. They can attract investment for local and national infrastructure, and provide countries with opportunities to strengthen their institutional and administrative capacities. But these industries also provide opportunities for rent-seeking that can hinder the conversion of EI revenues into sustainable development. Paradoxically, over the past three decades, resource-abundant developing countries have experienced poor economic performance in higher proportion than resource-poor developing countries. The factors that lead to underperformance have been studied extensively but are not fully understood, nor is the design of appropriate strategies for dealing with them (see Box C1).

The World Bank helps its client countries develop their mineral resources through a variety of lending and nonlending activities in the extractive industries. Lending assistance is provided through specific investment loans, technical assistance, and structural adjustment loans. Nonlending activities consist of a variety of advisory and analytical activities, including sector-related economic and other studies, workshops and conferences, and training. The focus of the Bank's involvement has evolved over four decades, beginning with an emphasis on production and exploration in the 1960s and 1970s, proceeding to commercialization of state enterprises in the 1980s and private sector development in the 1990s, and to a more inclusive approach involving civil society, local governments, and the private sector in recent years.

The involvement of the Bank and the WBG in the extractive industries has come under increased scrutiny in recent years from several sections of civil society. Some are concerned that the extractive industries exact a heavy toll on the environment, with the poorest citizens paying the highest price, and they have put the spotlight on the treatment of local populations, especially where a project involves involuntary resettlement.[59] Others have been concerned with issues of poor governance and failure to use rents effectively to support sustained economic development.[60] At the Annual Meetings in 2000, some NGOs asked the WBG to stop supporting the extractive industries, because, in their view, the adverse environmental, social, and governance impacts outweigh whatever economic and social benefits may accrue to the domestic economy and the poor from the extractive industries.[61]

In response to these concerns, the independent evaluation units of the World Bank Group[62] have prepared evaluations of the extractive industries activities supported by the WBG. Concurrently, WBG management launched the Extractive Industries Review[63] to better understand stakeholder views and advise the Bank on its role in the sector. While the evaluations have consulted with the EIR, they constitute a separate exercise that has been conducted independently. This annex reports on the Operations Evaluation Department evaluation of the World Bank's experience.

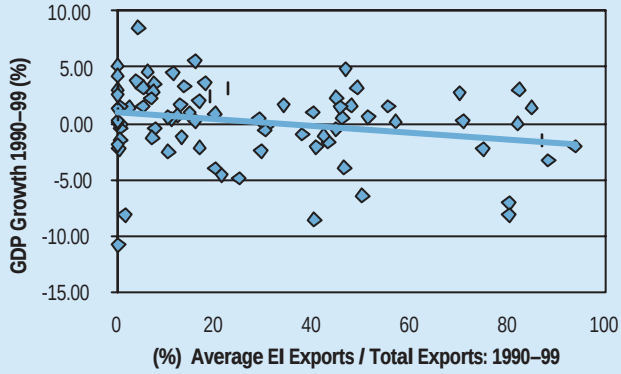
Study Objective and Process

This evaluation assesses the effectiveness of the World Bank in enhancing the sustainable devel-

Box C1 The "Paradox of Plenty"

In recent decades, many resource-abundant developing countries have experienced significantly lower rates of growth than resource-poor developing economies.[a] This phenomenon is accompanied by poor governance and lack of transparency in managing EI revenues, and significant negative environmental and social impacts. This phenomenon is referred to as the "paradox of plenty."

Figure C1: Slower Economic Growth with Greater EI Dependence[a]



Source: World Bank, World Development Indicators.

Economists and social scientists (among them, Auty 2000, Gelb 1988, Isham 2002, and Sachs and Warner 1995) have proposed several explanations for the phenomenon and strategies to deal with it, but no single model yet synthesizes the interplay of institutional, social, and political factors that is behind the observed paradox.[b] The emerging consensus is that the underperformance of resource-abundant developing countries, to the extent that it is the result of institutional and policy failure, is not inevitable. Overall, while the technical requirements for managing volatile and exhaustible revenue flows and other impacts such as the so-called Dutch disease, and devoting them to sustainable development are well understood, creating good governance appears to be at the heart of the institutional and policy changes needed to improve fiscal management, mitigate negative environmental and social impacts, and maximize benefits from the development of extractive industries.

Another perspective on this debate is that "the appropriate public policy question is not should we or should we not promote mining in the developing countries, but rather where should we encourage it and how can we ensure that it contributes as much as possible to economic development and poverty alleviation" (Davis and Tilton 2001).

a. This relationship, which is statistically significant at the 95 percent confidence level (*t*-statistic = –2.39), illustrates a conclusion that is widely accepted in the literature. No claim is made that EI dependence is the sole determinant of a country's economic growth. When non-borrower countries are included in the regression, the slope is statistically significant (*t*-statistic = –2.82) and steeper (–0.038 vs. –0.032).
b. Analysis in the 1960s focused on how to manage the macroeconomic impacts of resource export income, which raised domestic prices and made other exports less competitive internationally (so-called Dutch disease). More recent analysis emphasizes poor use of fiscal revenues from resources.

opment contribution of the extractive industries and distills lessons from experience to inform the Bank's future role in the sector. The evaluation design is based on the widely supported view that the main elements of a strategy to address the underperformance of many resource-abundant countries will be sound fiscal policies, rigorous mitigation of negative environmental and social impacts, and good governance.[64] Thus, the evaluation focuses on assessing economic effects,

environmental and social effects, and governance issues associated with the Bank's interventions in the sector.

Economic Effects

- Improving the generation of fiscal revenues from the development of extractive industries
- Promoting the distribution and expenditure of the revenues in support of sustainable development and poverty reduction
- Strengthening the framework for managing the volatility and exhaustibility of fiscal revenues from extractive industries
- Ensuring the adequacy of provisions for legal entitlements and compensation for negative impacts

Environmental and Social Effects

- Mitigating the adverse environmental impacts and enhancing positive impacts
- Mitigating the adverse social impacts, including those associated with resettlement and closure of existing facilities, and contributing to social objectives

Governance

- Improving the institutional and policy framework
- Strengthening governance processes

Evaluation Criteria

At the project level, this study evaluates the effectiveness of Bank-supported EI projects based on an assessment of their outcome, sustainability, and institutional development impact.[65] At the country level, the Bank's effectiveness is evaluated based on an assessment of the overall coherence, level of effort, and results of its assistance to resource-abundant countries for enhancing the contribution of the extractive industries to sustainable development.

Evaluation Process

The evaluation has been carried out in two phases: Phase I consisted of a review of the portfolio of World Bank extractive industry projects (referred to as the Portfolio Review hereafter), supplemented by a review of CASs and a literature survey.[66] The Portfolio Review covered all 76 Bank-supported projects in the EI sectors that were approved since fiscal year 1993—48 "closed" or completed projects and 28 "active" or ongoing projects.[67] The list of projects reviewed is in Attachment 1.

Phase II built upon the findings from Phase I and consisted of the following:[68]

- Three Thematic Studies of the Bank's EI portfolio: (i) revenue management, (ii) safeguards implementation, and (iii) governance (referred to hereafter as the Revenue Study, Safeguards Study, and Governance Study, respectively)
- Five Country Case Studies for Ecuador, Equatorial Guinea, Ghana, Kazakhstan, and Papua New Guinea (PNG)[69]
- Seven recent PPARs
- Two Surveys: (i) of task managers of active EI and EI-related projects and country economists of resource-abundant countries[70] and (ii) of participants of the EIR's Regional Stakeholder Workshops.[71]

Structure of the Report

Following the Introduction, Chapter 2 outlines the evolution of Bank involvement in the EI sectors and characterizes the EI portfolio and its performance. Chapter 3 reviews the economic benefits of Bank projects. Chapter 4 assesses the extent to which the Bank's portfolio implemented its environmental and social safeguard policies and addressed issues of environmental capacity-building and mine closure. Chapter 5 discusses the Bank's efforts to improve the generation, management, and utilization of fiscal revenues from resource extraction. Chapter 6 reviews the Bank's approach to governance issues in EI-dependent countries. Chapter 7 presents the recommendations.

2. The World Bank's Extractive Industries Role and Portfolio

The World Bank's role in extractive industries has evolved from mainly supporting exploration and production activities (1960s to the early 1980s), to sector policy reform and commercialization of state-owned enterprises (1980s), to a greater emphasis on capacity-building and private sector development (1990s). Also in the 1990s, the Bank began to help tran-

sition economies maintain production levels, rehabilitate or close uneconomical facilities, and attract foreign equity to their extractive industries sectors. Since the mid-1990s, the Bank's approach to extractive industries has been evolving toward addressing social, environmental, mine closure, revenue management, and sustainable development issues in a more holistic manner. It also has increased its collaboration with civil society, local governments, and the private sector.

The Bank's EI portfolio from the 1980s to the present illustrates the most recent shifts in its role. Between the 1980s and the 1990s, the Bank's overall lending to the EI sector decreased marginally in absolute terms and significantly relative to the Bank's overall lending. Lending for oil and gas fell considerably, while lending for mining rose sharply. Over the same period, the quality of EI project outcomes has been better than that of the Bank's projects as a whole, while the mining sector improved over the oil and gas sector during the 1990s.

The Bank's Evolving Policy and Role in the Extractive Industries

1960s to the early 1980s: The Bank assisted public sector investment efforts to enhance productive capacity in both the oil and gas sector and the mining sector. This trend accelerated in the oil and gas sector when the Bank established an Energy Department, in part to support lending for oil and gas operations after the second oil shock of 1979.The Bank established a program to attract private financing for oil and gas exploration in countries that lacked resources to develop national petroleum industries.

1980s: The Bank shifted its focus toward supporting sector policy reform and the commercialization of state-owned enterprises. Later in the decade, the Bank pursued sector reform and liberalization and developed a framework for private investment, leading to active promotion of private investment, such as for developing exploration data. In 1984, the Bank issued policy guidelines for oil and gas (Operational Manual Statement 3.82).[72]

The guidelines under OMS 3.82 provided for the Bank to assist borrower countries to (1) design and implement effective energy policies; (2) design and implement effective investment plans and sound policies for exploration, development, and use of petroleum; (3) mobilize the domestic and external financial resources required; and (4) develop local capacity to conduct petroleum operations and to provide petroleum service efficiently and competitively. The guidelines also suggested that the Bank promote exploration only where no significant exploration was taking place.

Early 1990s: In keeping with OMS 3.82, the Bank supported private provision of services in the extractive industries and encouraged new direct private investment. This trend was strengthened as Central and Eastern European countries began their transition to a market economy in the early 1990s. The Bank supported this shift by providing technical assistance and advisory services for the modification of legislative, institutional, and taxation regimes to accommodate and attract foreign equity investment in the extractive industries. The Bank's attention shifted more explicitly to creating an enabling environment for the private sector (thus changing the role of the government from owner-operator to regulator), privatization, mine closure, and industry restructuring as outlined in the 1992 Africa Technical Department Paper, *Strategy for African Mining*.73 Thus, as countries moved from public to private ownership and extractive resource exploitation, the Bank moved from direct lending for production-related projects to supporting initiatives that would bolster private sector growth.

The late 1980s and early 1990s also witnessed rising public concern about environmental degradation and social inequity. A Bank Operational Directive (OD) on environmental assessment (OD 4.01) was issued in 1989 and, revised as a more comprehensive policy for environmental and social impacts, adopted in 1991. In 1999, it was converted to Operational Policy (OP) 4.01, which covers all projects except for structural adjustment loans.

OP 4.01 is particularly important for the EI sectors because of their potential for negative envi-

ronmental and social impacts. The objective of the policy is to ensure that projects are environmentally and socially sustainable by preventing, mitigating, or compensating for potential adverse impacts. Under the policy, the environmental assessment of projects should take into account the natural environment (air, water, and land), human health and safety, social aspects (involuntary settlement, indigenous peoples, and cultural property), and transboundary and global environmental impacts.

The formulation and implementation of safeguard policies, which have been widely accepted and emulated outside the Bank, illustrate how the Bank can play a convening role and have influence beyond the implementation of projects (see Box C2).

Mid- and Late 1990s: The mid-1990s saw the Bank take a more inclusive approach to its developmental operations and begin to emphasize the need for external partnerships connecting government, the private sector, and civil society in the design and implementation of socially and environmentally sensitive projects. In the latter part of the 1990s, there was an increased focus on reform and deregulation programs in an effort to further good governance as a central element in the improvement of country economic performance. In 1998, growing management concern about environmental and social impacts led to the creation of the Bank's safeguards policy framework, which combined the environmental assessment policy with nine other "do no harm" policies.[74] This was followed by the establishment

Box C2

Channeling the Bank's Convening Power for Sustainable Development of the Extractive Industries Sectors

The Bank, often in collaboration with other organizations, has helped bring together various stakeholders in the extractive industries sectors to address issues at the national, regional, and global levels. This convening power is prized because the Bank has access to all stakeholders, broad development experience, and ongoing involvement with project investments and technical assistance in the sector.

In the oil and gas sector, the Bank has collaborated with the government of Norway in a major Global Gas Flaring Reduction Initiative,[a] which was the subject of a 2002 conference in Oslo that hosted representatives of industry, government, the research community, and NGOs. In September 2002, an international training program, Good Governance in a Global Economy—Oil and Gas Policy and Regulation, held in Calgary, Canada, in collaboration with the Canadian Petroleum Institute and the IFC, again brought together senior government and industry representatives.

In the mining sector, the Bank and the government of Papua New Guinea co-sponsored the September 2002 Conference on Mining and the Community for Asian and Pacific Nations in Madang. The event, in which other Asian mining countries took part, is widely seen as having had an important impact on the awareness of social and community issues in Papua New Guinea and in the region. A similar event, Mining and the Community, was held for Latin American nations in Quito, Ecuador, in 1998. In May 1995, in Washington, D.C., the Bank hosted an International Roundtable on Artisanal Mining that brought together representatives from different parts of the world. In March 2001, the Bank, along with other multilateral institutions, launched the Communities and Small-Scale Mining Initiative[b] to improve coordination among miners, communities, donors, governments, and other stakeholders. Another significant event was a roundtable focused on foreign investment and mining development in western China. The October 2000 conference, Attracting Private Mining Investment, was held in Urumqi, China, and was organized jointly with the Association of South East Asian Nations (ASEAN) Federation of Mining Associations, the Malaysian Chamber of Mines, and the Metal Mining Agency of Japan.

a. For details, see http://www.worldbank.org/ogmc/global_gas.htm.
b. For details, see www.casmsite.org.
Source: World Bank.

of an enhanced safeguards compliance system in 1999, a concerted effort to implement the policies, which previously had been more flexibly interpreted as "guidelines."

New priorities began to emerge for sustainable mining and regional and local economic development through private investment in mining, and community development. The evolution in the Bank's mining strategy was presented in two World Bank Technical Papers: *World Bank Group Assistance for Minerals Sector Development and Reform in Member Countries*[75] and *A Mining Strategy for Latin America and the Caribbean*.[76] The new priorities were documented in various partnerships, publications, conferences, and workshops on community issues, mine closure, revenue management, and sustainable development supported by the World Bank Mining Division between 1997 and 2002.

In the late 1990s, it became clear that despite efforts to coordinate over the years, IFC and the Bank had not capitalized enough on synergies between transactions and policy work. To integrate WBG activities and advisory work in the extractive industries more closely, the oil and gas unit and the mining unit of the Bank and IFC were reconstituted as joint Bank-IFC Global Product Groups.

Energy Business Renewal Strategy, 2001: The most recent rethinking of the Bank's role in the energy sector is reflected in the Energy Business Renewal Strategy (EBRS), which was presented to the Board in 2001. The EBRS recognizes a declining demand for traditional IBRD/IDA products in the energy sector and shifts the focus to the WBG's priorities—including poverty alleviation—and comparative advantages: addressing poverty, macro-governance, and the environment; supporting reform and regulation to help support competitive energy markets; facilitating the transfer of knowledge among developing countries; and catalyzing investment in noninvestment-rated countries. The EBRS aims to facilitate access to modern fuels, create objective and transparent regulatory mechanisms, and catalyze private investments. It continues the Bank's emphasis on closing loss-making mines and oil refineries; promoting clean transport fuels and switching from coal to gas; and facilitating environmentally sustainable exploration, production, and distribution of oil, gas, and coal. Reducing gas flaring and facilitating carbon trading and joint investments to reduce greenhouse gas (GHG) emissions are also priorities under the new strategy (see Box C3).

Box C3 — Climate Change: The WBG's Approach

It is increasingly recognized that the adverse effects of climate change, especially through burning of fossil fuels, can produce changes in precipitation patterns and rise in sea levels that can pose major developmental challenges for developing nations. Hence, the WBG supports its client countries in (a) mitigating the adverse impacts of climate change, (b) reducing vulnerability and improving adaptation, and (c) building capacity for both a and b. Successful support requires policy dialogue, integrated planning and generation, and dissemination of knowledge backed by investment lending.

The WBG's approach to mitigating the effects of and vulnerability to climate change is laid out in *Fuel for Thought* (World Bank 2000), which highlights appropriate policy for improving energy efficiency and the use of clean technologies and fuels. Further, the WBG seeks to leverage external resources, particularly the Global Environment Facility (GEF), as well as new instruments, such as the Prototype Carbon Fund, Community Development Carbon Fund, Bio-Carbon Fund, and private sector resources within the framework of the Kyoto Protocol. In terms of capacity-building, the WBG helps clients through methodological, technical, and investment work to develop market mechanisms, sectoral and national plans, and international cooperation.

Source: World Bank.

Overview of the 1980s and 1990s Projects

Lending for oil and gas decreased while mining increased: Between the 1980s and 1990s, the overall amount of Bank lending to the EI sectors declined by 6 percent (Figure C2). However, this overall decline masks a difference between the two sectors: lending for the oil and gas sector fell by 34 percent, while for the mining sector it rose by 63 percent. During the same period, the EI sectors' share of the Bank's entire portfolio declined from 4 percent of lending to 2 percent.

Figure C2 Increased Lending to Mining Has Been More Than Offset by Decreased Lending to Oil and Gas

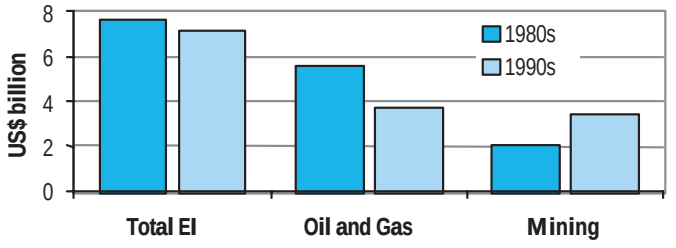


Figure C3 Quality of WB Lending for EI Projects

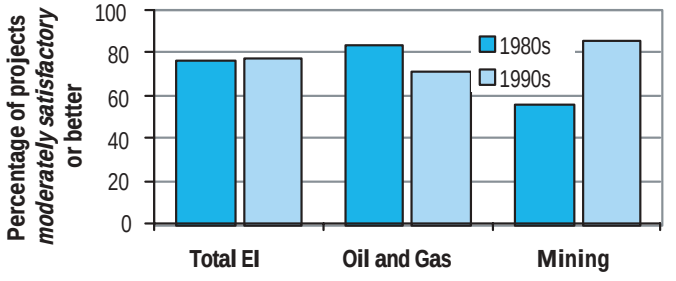


Figure C4 Institutional Development Impact of EI Projects

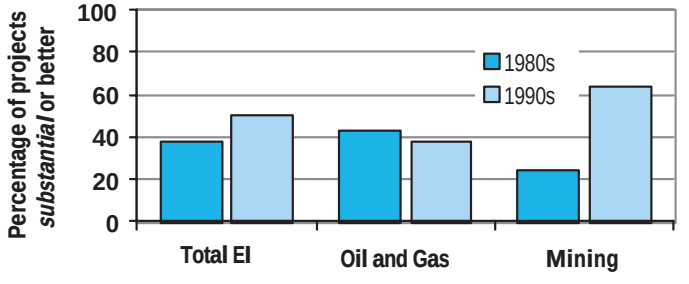
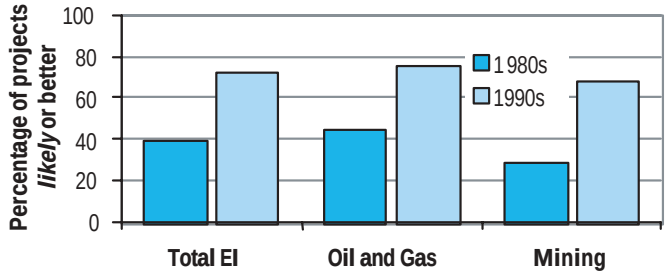


Figure C5 Sustainability of EI Project Outcomes



Outcome: Overall EI project outcome[77] ratings were higher than the Bank-wide average during the 1980s and 1990s, though they fell somewhat for oil and gas and rose sharply for mining projects. EI projects with outcomes rated "moderately satisfactory" or better rose slightly (77 percent to 78 percent). The percentage dropped for oil and gas projects (84 percent to 71 percent) and rose significantly for mining projects (55 percent to 86 percent). Taken together, these outcomes are better than for the Bank as a whole, for which the comparable ratios rose from 65 percent in the 1980s to 75 percent in the 1990s.

Institutional Development Impact: The institutional development impact[78] for all EI projects improved between the 1980s and 1990s, declined somewhat for oil and gas, and rose appreciably for mining projects. The institutional development impact of all EI projects—in terms of percentage of projects that were rated "substantial" or better—rose from 38 percent to 50 percent between the 1980s[79] and 1990s. The oil and gas sector saw moderate decline (43 percent to 38 percent), while the mining sector showed considerable improvement (24 percent to 64 percent) over the same period. Taken together, these ratings are higher than the average for all Bank projects, which rose from 30 percent in the 1980s to 43 percent in the 1990s.

Sustainability: The sustainability[80] of project benefits saw very large gains in both the oil and gas sector and the mining sector. The sustainability of outcomes—in terms of the percentage of projects for which the rating was "likely" or better—improved from 39 percent to 72 percent for all EI projects between the 1980s and 1990s with gains in both oil and gas (44 percent to 75 percent) and mining (28 percent to 68 percent). Overall, these ratings improved much faster than the Bank-wide average, which rose from 44 percent in the 1980s to 56 percent in the 1990s.

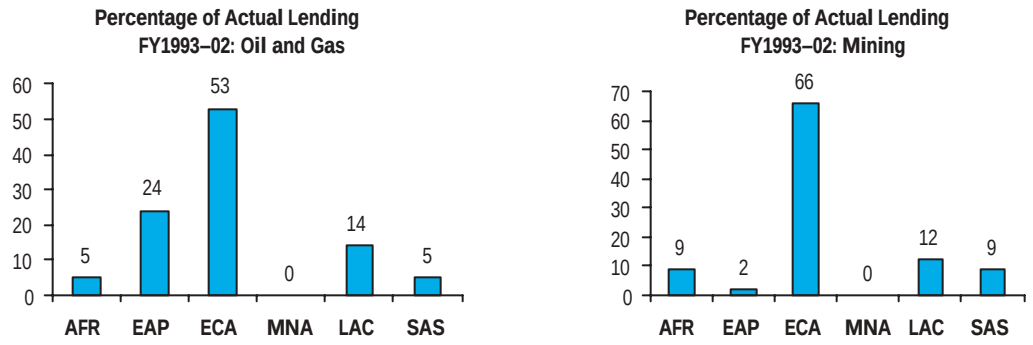
Highlights of the Portfolio of Projects under Review: FY93–FY02

The Portfolio Review covered all 76 EI projects[81] approved during the fiscal period 1993–2002. This portfolio consists of 48 completed projects (oil and gas: 24; mining: 24) and 28 *active* projects (oil and gas: 15; mining: 13). This section describes the main characteristics of this portfolio.[82]

The transitional economies of the Europe and Central Asia Region accounted for the largest share of lending: For completed projects in both the oil and gas sector and the mining sector, the Europe and Central Asia (ECA) Region received the major share of lending (Figure C6). The East Asia and Pacific (EAP) Region accounted for the next largest share of oil and gas lending, and Latin America and the Caribbean (LAC) had the next largest share of mining lending.

The most common project objectives reflected some of the similarities between the two sectors: Analysis of the project objectives (each project could have more than one)

Figure C6 The Europe and Central Asia Region Accounted for the Largest Share of Lending in Both Sectors



identified a few similarities and many differences between the two sectors. Among the similarities, for both oil and gas projects and mining projects, institutional development, private sector development (PSD), and environmental management were among the leading objectives.

But the remaining objectives tended to differ across the two sectors and between completed (older) and ongoing (more recent) projects. For completed oil and gas projects, the next most frequent objectives included pipeline construction, policy reform, production, and social objectives, in descending order. For active projects, the other objectives were production, pipeline construction, and social issues, in descending order. For completed mining projects, other objectives were rehabilitation/closure of mines, social issues, production, and ASM. For active mining projects, the other objectives were social issues and policy reform—production did not figure at all.

The importance of the environmental assessment policy is apparent in the high percentage of projects in categories A and B: Among oil and gas projects, approximately 33 percent of all active and completed projects came under Category 'A'[83] of the Bank's environmental assessment policy (OD/OP 4.01). For Category 'B,' the corresponding percentages were 25 and 13. For mining projects, only 20 percent of the completed projects and none of the active projects came under Category 'A.' In addition, 50 percent of completed and 30 percent of active mining projects came under Category 'B.'

Project performance ratings have been better than average: The Bank's portfolio of completed EI projects generally has performed well in all three categories used by OED: outcome, sustainability, and institutional development impact.[84] Of the completed oil and gas projects, outcome was rated "moderately satisfactory" or better for 71 percent, sustainability was rated "likely" or better for 73 percent, and institutional development impact was rated "substantial" or better for 37 percent. Of the completed mining projects, outcome was rated "moderately satisfactory" or better for 86 percent, sustainability was rated "likely" or better for 68 percent, and institutional development impact was rated "substantial" or better for 64 percent.

The portfolio of active projects also has been performing well according to supervision reports. All active oil and gas projects had development outcome ratings of "satisfactory" or better, and no adverse issues were reported regarding compliance with the Bank's safeguard policies. All active mining projects had ongoing development outcome ratings of "satisfactory" or better, and only one project reported less than satis-

factory compliance with a provision under the Bank's safeguards policies. It should be noted, however, that OED has not validated these self-assessments of active projects.

3. Economic Benefits from Bank Projects

Extractive industries have the potential to make a major contribution to the development of resource-abundant countries by transforming their mineral wealth into sustainable development. The rationale for Bank projects is based on the expectation that they will support the country's development goals, and this expectation is underpinned by an economic appraisal intended to ensure that the objectives have been chosen appropriately and that the project is the least-cost way of attaining the stated objectives.[85] The discounted present value (NPV)of the net benefits, the economic rate of return (ERR), or, where the benefits cannot be measured in monetary terms, a cost-effectiveness criterion are the indicators of choice for making this determination. Following completion of the project, an ex-post recalculation of the economic rate of return or the cost-effectiveness criterion is used to determine whether the project produced the expected benefits in an efficient manner.[86] This chapter discusses the available information on the extent and sources of the economic benefits drawing from the Portfolio Review of the Bank's extractive industries projects.

Reporting of Economic Benefits

The Implementation Completion Reports (ICRs) are an integral part of the Bank's knowledge management and accountability reporting system and are intended to document and evaluate the outcomes and impacts of the project, including their economic benefits. As summarized in Table C1, the Portfolio Review found that, out of the 44 completed projects, ICRs of 17 (mostly investment loans) had re-estimates of ERRs and NPVs, and an additional 13 ICRs (mostly of technical assistance and sectoral adjustment loans) featured at least some ex-post quantification and valuation of the benefits.[87] This finding is consistent with the relative simplicity of attributing and quantifying the costs and benefits of investment projects compared with other types of projects. Nevertheless, given the issues that have been raised about the economic contribution of extractive industries projects, a greater effort to document and analyze economic benefits would be desirable, including a cost-effectiveness assessment where an ERR is not feasible, in line with the *Guidelines for Preparing ICRs*.[88]

For the Specific Investment Loans (SILs), the benefits derived mainly from increased production, increased private investment, and improved productivity. Out of 20 SILs[89] in the portfolio, 18 had an ERR or NPV estimated at appraisal, of which 16 were re-estimated at com-

Table C1 Economic Evaluation in Implementation Completion Reports

Instrument (number)[a]	ERR/NPV/ least-cost analysis conducted at appraisal	ERR/NPV/ least-cost analysis reported in ICR	Quantification of benefits feasible?	Quantification done in ICR?	Monetary value of benefits feasible?	Monetary value provided in ICR?
			Yes/No/Partly	Yes/No/Partly	Yes/No/Partly	Yes/No/Partly
SILs (20)	18	16	20/–/–	17/–/3	20/–/–	15/2/3
TALs (15)	3[b]	1	4/4/7	3/9/3	6/2/7	3/8/4
SECALs (9)	–	–	7/1/1	5/3/1	6/1/2	6/3/–
Total (44)	21	17	31/5/8	25/13/7	32/3/9	24/13/7

a. SILs include one emergency rehabilitation loan (ERL); technical assistance loans (TALs) include one GEF project; Sectoral Adjustment Loans (SECALs) include one rehabilitation investment loan.

b. The Equatorial Guinea Petroleum technical assistance (TA) project estimated a financial rate of return (FRR) and the Azerbaijan Petroleum TA.

pletion. While it is comforting to note that, in 15 out of these 16 cases, the returns were greater than 10 percent,[90] it would have been feasible to have reported ex-post analyses for three of the remaining SILs.[91]

The 15 Technical Assistance Loans (TALs)[92] in the portfolio were associated with quantifiable and valuable benefits, such as increased private investment, increased gas sales, increased oil and minerals production, increased fiscal revenues, improved environmental conditions, and improved sector efficiency, as well as benefits that are more difficult to quantify, such as improved legal and regulatory frameworks and institutions, and preparatory studies for future projects. Of the 15 TALs, one had a re-estimated ERR[93] and 7 ICRs provided at least some indication of the monetary value of the benefits. Because some benefits were amenable to monetary valuation in 12 of these projects, more could have been done to document their cost-effectiveness and highlight their economic contributions.

All nine completed Sectoral Adjustment Loans (SECALs)[94] were in the mining sector and were associated with increased or decreased production of minerals (coal, in most cases), reduced government subsidies, cleaner environment, increased operational efficiency, improved profitability, and increased private investment. Six of the ICRs provide some data on these achievements, from which a judgment can be made about the efficiency of the projects. The other three ICRs did not provide any quantitative information on results.

Economic Benefits from Private Sector Development

World Bank efforts to promote privatization and boost private investment had largely positive outcomes. Eleven out of 16 completed projects with PSD components yielded or promised to yield significant benefits by laying the groundwork for improving the efficiency of public enterprises through commercialization and privatization, and increasing EI activity by attracting private investment.

Privatization was politically complex in all cases. Wherever progress was made, it was largely due to strong government commitment, supplemented by flexibility on part of the Bank. This is evident in Bolivia's Regulatory Reform and Capitalization and Hydrocarbon Sector Reform projects, as well as in Peru's Privatization Adjustment Loan and Energy/Mining projects. Privatization of coal mines in Russia was a highly complex task carried out in a difficult political and industrial relations environment, and it might not have been possible without strong government commitment and efforts at consulting important stakeholders, together with Bank flexibility in the design and implementation of the projects. On the other hand, inadequate government commitment and political consensus, apart from issues of evolving sector strategy and commercial viability, appear to be behind the limited progress of privatization in Poland's Hard Coal SECAL I and II projects. The slow progress in privatizing Zambia Consolidated Copper Mines can be attributed largely to unfavorable market conditions for copper and political interference in the process.

A particularly effective form of PSD intervention was attracting increased private investment—such as in the mining sectors of Guinea and Tanzania—through relatively low-cost TA interventions (see Box C4).

Economic Benefits from Mine Closure or Rehabilitation

More than 60 percent of completed mining projects, including six completed SECALs in Poland, Russia, and Ukraine, involved large-scale rehabilitation or closure of uneconomical coal mines. On a smaller scale, 15 small copper mines and 66 chrome mines were closed or privatized in Albania. The economic benefits from such projects derive mainly from the reduced burden on government budgets (see Box C5).

Rehabilitation and closure of coal mines in Russia were major tasks, as already noted, but government commitment, stakeholder consultation, and Bank flexibility contributed to the positive results. In Ukraine, favorable results were obtained under less difficult conditions. The strategy of approaching Ukraine's rehabilitation/closure process cautiously, starting with the smaller-scale Ukraine Coal Pilot project and

Box C4

Experience with Private Sector Development in the Extractive Industries Sectors

The Bank's efforts at commercialization and privatization and at improving the climate for private investment yielded largely positive returns in terms of increased investments and exports and reduced burden on state budgets. These efforts generally involved TALs that were smaller than investment and adjustment loans. The positive results were associated with strong government commitment, the prior establishment of an appropriate legal and regulatory framework, and flexibility on the part of the Bank. However, even where earnest efforts were made, volatile commodity prices and macroeconomic crises affected some of the outcomes adversely.

Armed with a strong mandate for privatization, Bolivia moved ahead quickly with the sale of three state-owned hydrocarbon enterprises that yielded US$828 million and improved prospects for investment of up to US$2 billion during 1998–2000. Strong government commitment also was evident in Peru, where the hydrocarbon sector was opened to private investment. Despite strong political and labor opposition, Russia achieved a major feat by privatizing 77 percent of coal assets by 2001, helping decrease subsidies by 40 percent.

Tanzania's and Guinea's success in attracting high levels of private investment to their mining sectors was aided by a relatively integrated approach to developing an enabling legal, regulatory, and fiscal framework. Tanzania's mineral exports grew from US$15 million to US$312 million during 1992–2001, while in Guinea, mineral exports rose from US$400 million to US$500 during 1996–2001.

Argentina's Mining Development TALs made a good beginning in improving the institutional framework for privatization, but the economic crisis in 2002 has diminished their immediate impact. Little headway was made in Zambia on privatizing the dominant Zambia Consolidated Copper Mines because of a volatile market for copper and stakeholder disagreements. The overall efficacy of the World Bank's interventions in Ghana's mining sector during the 1990s is judged to be substantial because of the success in attracting private capital and strengthening sector management capabilities, particularly of the Minerals Commission.

In Ecuador, a new Mining Law passed in 1991 and amended in 2000 included much-improved provisions to attract private sector investment and helped develop a regulatory framework close to best practice. But the country's political instability and unreliable judicial system acted as disincentives, which were compounded by the negative effect of falling international commodity prices.

Finally, Kazakhstan's Petroleum TA project was successful in improving the capacity of key petroleum sector agencies to attract foreign investment. It financed the continuation of technical, financial, and legal advisory services that were critical to the conclusion of two major Caspian Sea projects. On the negative side, the effort to privatize Uzenmunaigas, the country's largest state-owned petroleum enterprise and a centerpiece of the Bank-funded TA program, did not make much headway. On the other hand, the Bank also helped reform in a broad range of sector policy issues covering petroleum legislation and taxation, pricing, and privatization of retail petroleum trade.

Source: World Bank.

leveraging its success for the larger Ukraine SECAL, appears to have worked well. A notable feature of Poland's Hard Coal SECALs I and II was that they succeeded in reducing uneconomical production levels and excess employment while keeping a tense situation from exploding.

However, in all three countries, attempts to generate alternative employment in other sectors for laid-off workers remained an important issue, although there was progress in resolving the employment problem in Russia as the economy began to recover from the crisis of 1998. This may imply that adequate attention to the demanding task of generating alternative employment should be the focus of projects outside of the extractive industries sectors.

Box C5

Economic Benefits of Rehabilitation or Closure of Uneconomical Mines

The economic benefits of closing uneconomical mines derive mainly from reducing the burden on government budgets through lowered or eliminated subsidies, reduced waste of resources, the freeing up of labor that can be used more productively elsewhere, and improved climate for privatization and competition contributing to overall efficiency.

The experience was positive in Poland, Russia, and Ukraine. The Poland Hard Coal SECAL I and II projects reduced excess coal production capacity by 23 percent to 105 million tons per year and employment by 36 percent to 155,000 between 1997/98 and year-end 2001. In Poland, the coal industry's financial performance improved from a loss of US$1.0 billion in 1998 to a profit of US$43.3 million by 2001 (at an exchange rate of US$1 = 0.2545 PLN). Under Ukraine's Coal Pilot and Coal SECAL projects, more than 25 percent of Ukraine's coal mines were closed, and the efficiency of the remaining mines was increased 85 percent between 1998 and 2000. The coal production workforce was reduced by 24 percent between 1995 and 1999, while production dropped by only 3 percent. Subsidies for loss-making coal mines were halved, from US$500 million in 1996 to US$250 million in 1999.

As of 2001, Russia's Coal SECAL I and II led to the closure of the 183 most uneconomical mines, of which 158 completed substantive closure works. As a result of these projects, budgetary subsidies for the coal sector were reduced from 1.05 percent of gross domestic product (GDP) in 1993 to 0.07 percent of GDP by 2001.

In both Russia and Ukraine, Bank support not only helped reduce subsidies, but also shifted the composition of subsidies away from operating expenses toward social mitigation, mine closure, and environmental cleanup.

Source: World Bank.

Economic Benefits from Environmental Cleanup and Mitigation

Most of the projects in the EI portfolio had environmental components of varying magnitude and importance. Some dealt with cleanup of existing environmental conditions, and others were concerned with mitigating the environmental effects of new operations under the project or related projects. Only a few projects—five completed and three active—focused mainly on dealing with existing or ongoing environmental problems. These projects were expected to yield economic benefits through healthier living conditions, greater resources for productive activities, and improved productivity of resources, through reclamation of land and improvement to air, water, and soil quality.

Five completed projects, in Brazil, Ecuador, India, Russia, and Thailand, focused on technical assistance for addressing environmental impacts of past or ongoing extractive industries activities. While the outcome was broadly satisfactory in India (strategy for managing coal mine fires in Jharia coalfields), Brazil (reclaiming degraded mining areas and constructing tailings ponds through the Environmental Conservation and Rehabilitation project), and Thailand (converting to unleaded fuel production in a Bangchak refinery), in the case of the recently completed Coal Sector Environmental and Social Mitigation project in India, an Inspection Panel investigation found it to be out of compliance with some safeguards provisions.

Notwithstanding the lack of compliance, the project resulted in considerable improvement in Coal India's approach to social and environmental mitigation. The Oil Spill Contingency project for the western Indian Ocean islands of Comoros, Madagascar, Mauritius, and Seychelles seeks to build their capacity to comply with related international conventions and protocols.

Among the projects that were not focused exclusively on environmental issues but contained significant environmental components, the Bolivia-Brazil Gas Pipeline project contained provisions for stakeholder consultation and community participation that gave credibility to environmental initiatives and improved their chances of success. Bolivia-Brazil's experience stood in contrast to the Ecuador and India projects in this

respect. Another feature worth noting is that while many projects in the portfolio contained significant environmental components, almost none of them explicitly factored the environmental benefits into their economic cost-benefit analysis. A notable exception was Bolivia-Brazil's pipeline project, which applied an environmental premium for the displacement of more polluting fuels by natural gas in its economic analysis.

Economic Benefits of Artisanal and Small-Scale Mining

The rationale for promoting ASM needs to rest on its potential for alleviating poverty by creating and maintaining employment in a socially and environmentally acceptable manner. Among the Bank projects reviewed in this study, ASM issues were a significant component in three completed projects in Ecuador, Ghana, and Tanzania and four active projects in Burkina Faso, Madagascar, Mozambique, and Zambia. The main approaches involve improving the legal framework/formalization of ASM activities, increasing tax revenues (Ecuador, Madagascar, Mozambique, Tanzania), improving production methods and technology and providing extension services (Burkina Faso, Ecuador, Ghana, Mozambique, Tanzania), improving environmental awareness and management (Burkina Faso, Ecuador, Ghana, Madagascar, Tanzania), and improving the capacity of government to deal with ASM (Burkina Faso, Ecuador, Ghana, Madagascar, Tanzania, Zambia). Based on results to date, the main lesson is to recognize ASM as a poverty-driven issue and to move from using a narrow technical approach to a more integrated approach—ensuring an appropriate legal and fiscal framework, involving ASM communities in decisionmaking, and considering environmental and social aspects of ASM at the project design stage (see Box C6).

Conclusions

Overall, 73 percent of the ICRs of completed extractive industries projects contained at least some ex-post quantification and valuation of the benefits, but only 39 percent had a re-estimated ERR or NPV, and the rest do not discuss the cost effectiveness of achieving the objectives.[95] Based on an evaluation of the feasibility of additional economic analysis, this share could have been raised to about 89 percent. While the project's economic returns constitute only an intermediate outcome in the transformation of mineral wealth into sustainable development, adequate reporting and validation of project benefits, in line with Bank policy, constitutes the basis for most further evaluation and should be an essential component in the Bank's accountability reporting. Some improvement in this area also would help the Bank address the perception that the economic benefits of the projects may have been outweighed by adverse environmental and social impacts.

Aside from the reporting issue, the main lesson that emerges is that projects with satisfactory outcome ratings tended to be associated with greater government commitment to project objectives and adequate infrastructure (India Coal Sector Rehabilitation, Russia I and II Oil Sector Rehabilitation, and Thailand Gas Transmission I and II), favorable commodity prices (Russia I and II Oil Sector Rehabilitation), and a high level of stakeholder involvement (Bolivia-Brazil pipeline and Bosnia-Herzegovina's Natural Gas System Reconstruction projects). The less successful projects appeared to be affected by poor government commitment (Ethiopia's Calub Gas Development project) and unfavorable economic conditions or commodity prices (Korea's Petroleum Distribution and Sector Improvement project and Mongolia's Coal project). These lessons are broadly consistent with the Bank's experience in other sectors.

4. Environmental and Social Impacts and Their Mitigation

Addressing Environmental and Social Impacts

The potential benefits from the extractive industries often have been undermined by adverse environmental and social impacts. Negative environmental impacts from oil and gas activities can result from leakages and spills, flaring of excess gas, and the opening of access to new areas where settlement and deforestation can occur. Mining activities can be associated with defor-

Box C6 Artisanal and Small-Scale Mining

Nearly 13 million people are involved in ASM worldwide, with a high proportion of women (10 to 45 percent) and children (5 to 30 percent) in several countries. ASM production accounts for 15 to 20 percent of the value of the world's nonfuel mineral production—and as much as 90 to 100 percent in some countries. The majority of earnings from ASM, especially artisanal mining, are used for subsistence. Being largely in the informal sector (50 percent), artisanal and small-scale miners often have no legal rights to mine, do not pay taxes, and are prone to exploitation by middlemen. In general, ASM is characterized by poor standards of safety and health and greater environmental cost per unit of output than large-scale mining activities.

Developmental priorities for ASM are improving the legal and regulatory framework, investing revenues for sustained benefits, avoiding or mitigating negative environmental and social impacts, encouraging alternative economic activities, adopting a gender-sensitive approach, ending child labor, and ensuring good relationships between miners and other stakeholders.

In Ghana, upon advice from the Bank, gold production by small-scale artisanal miners was legalized in 1989 by passage of the Small-Scale Mining Law. The establishment of a legal purchasing arrangement, initially by a public and later by private buying agents offering world prices for gold and diamonds to artisanal miners, was the result of active policy dialogue with the Bank.

Ecuador's Mining Development and Environmental Control project helped to formalize most of the country's ASM activities by granting title to 166 of 169 ASM associations that existed before 1995. This may have contributed to the absence of land invasions by informal miners in the country in recent years. Currently, 99 percent of ASM enterprises in the country have presented environmental impact assessments (EIAs) or environmental management plans (EMPs) either individually or through associations. The project helped demonstrate the feasibility of reducing ASM-related contamination, succeeded in promoting change to less polluting processing technologies, and increased environmental health and safety awareness among miners and other stakeholders.

Sources: **Mines and Minerals for Sustainable Development (MMSD) 2002; Country Case Studies; World Bank.**

estation, soil erosion, contamination of surface and groundwater from toxic wastes, and mine tailings and coal mine fires. In addition to the damage from ongoing projects, closed and abandoned projects have often left a legacy of cleanup costs that no one may be willing or able to pay.[96]

Negative social impacts can arise from resettling local populations, including indigenous peoples, or from disrupting traditional lifestyles to make way for extractive industries. Other social impacts can follow after resources are exhausted or have become uneconomical to extract, resulting in unemployment and scaled-down or abandoned infrastructure. On the whole, social impacts tend to be more prominent for mining than oil and gas activities, given the higher employment generated at the local level and greater exposure to environmental, health, and safety hazards.

To mitigate the adverse environmental and social impacts of the projects it supports, the World Bank, over the past two decades, has developed a comprehensive framework of safeguard policies (see Chapter 2). Its main objective is to ensure that projects "do no harm"; that is, that they are environmentally and socially sustainable by ensuring that potentially adverse impacts on the natural environment (air, water, and land), human health and safety, and social aspects (involuntary settlement, indigenous peoples, and cultural property), and transboundary and global environmental impacts are prevented, mitigated, or compensated. These policies define explicit requirements for the Bank to follow. In light of the potential adverse impacts associated with oil, gas, and mining activities, the evaluation included a review of the degree to which the Bank's appraisal and implementation of extractive industries projects have been consis-

tent with these requirements (the Safeguards Review), whose findings are summarized in the first section of this chapter.

Beyond achieving the objectives of the safeguards, an important aspect of the Bank's approach to development assistance involves the pursuit of positive environmental and social goods, such as the remediation of pre-existing conditions resulting from past mining and petroleum activities (legacy issues), and the strengthening of the policy and institutional framework to promote the implementation of safeguards across the entire economy. Many extractive industries projects have such components to "do good," and their experience is also discussed.

Consistency with Objectives of the Safeguards: "Do No Harm"

The Safeguards Review focused on assessing the projects' consistency with the objectives of the safeguard policies in three areas: at approval, during implementation, and in the adequacy of Bank supervision inputs and reporting. Desk reviews were carried out on a sample of 38 projects drawn from the portfolio of 76 closed and active extractive industries projects approved during or after fiscal year 1993.[97] The sample was purposely chosen to include projects that were likely to have adverse environmental or social impacts and included 19 oil and gas and 19 mining projects.[98] In terms of the categorization of projects under the Bank's Environmental Assessment Policy, the sample included 15 'A' projects, 17 'B' projects, 5 'C' projects, and 1 uncategorized project.[99]

The Bank's safeguard policies contain a long list of requirements that have been subject to differing interpretation, and no independent and generally agreed criteria have been established to determine if a project is in substantial compliance.[100] In the absence of an established approach, the Safeguards Review has synthesized the policy requirements into a set of basic criteria and applied them for sample projects. While there have been minor changes in some of the policies since 1993, each project was evaluated based on the specific version of the policy in force at the time the project was approved.[101]

Overall, most projects were found to be substantially consistent with the applicable safeguards at approval and during implementation. About 74 percent of the sample of 'A' and 'B' projects were substantially consistent with safeguards at approval, 67 percent during implementation, and only 41 percent were rated to have had adequate supervision inputs and reporting. The 'A' projects' performance was higher than the 'B' projects' performance in all three areas, but the difference was greatest at the approval stage. While the degree of consistency was lower than the WBG aims to achieve, there is no implication that the performance pattern of these projects is different from that in other sectors, as they are all subject to the same policies, procedures, and constraints.[102]

The degree of consistency appears to have improved modestly over time. A comparison of the findings for the 'A' and 'B' projects in the sample approved before and after year-end 1995 indicates that, at the approval stage, there has been no overall trend. At the implementation stage, however, there has been some improvement in the more recent projects.[103]

The findings of the Safeguards Review fall between those of the external and internal surveys. The survey of participants of the EIR's Regional Stakeholder Workshops[104] found that, with regard to the promotion of sustainable environmental performance and mitigation of negative environmental effects, the WBG's effort was rated "mostly effective" or better by 60 percent of respondents and its success as "mostly effective" or better by 46 percent. With regard to the promotion of sound social development and the identification and mitigation of negative social impacts on local communities and indigenous peoples, the WBG's effort was rated "mostly effective" or better by 40 percent of respondents and its success as "mostly effective" by 28 percent. Bank staff involved in EI projects feel more positive about the adequacy with which EI projects have mitigated negative environmental impacts (83 percent) and social impacts (75 percent). While the survey findings corroborate that the EI portfolio faces a gap in fully achieving the objectives of the safeguards, the difference from the Safeguards Review points to

the possibility of both internal and external perception gaps.

The review also identified a number of promising practices that have established new benchmarks for safeguard policy implementation performance and "value added." Such practices were found in the Bolivia-Brazil Gas Pipeline project, Chad-Cameroon Petroleum Development and Pipeline project, Poland Coal SECAL II, and Thailand Clean Fuels and Environmental Improvement project. These projects have achieved international recognition for the comprehensiveness of their environmental and social mitigation measures and stand as examples of what compliance with safeguards can achieve.

Issues During Safeguards Implementation

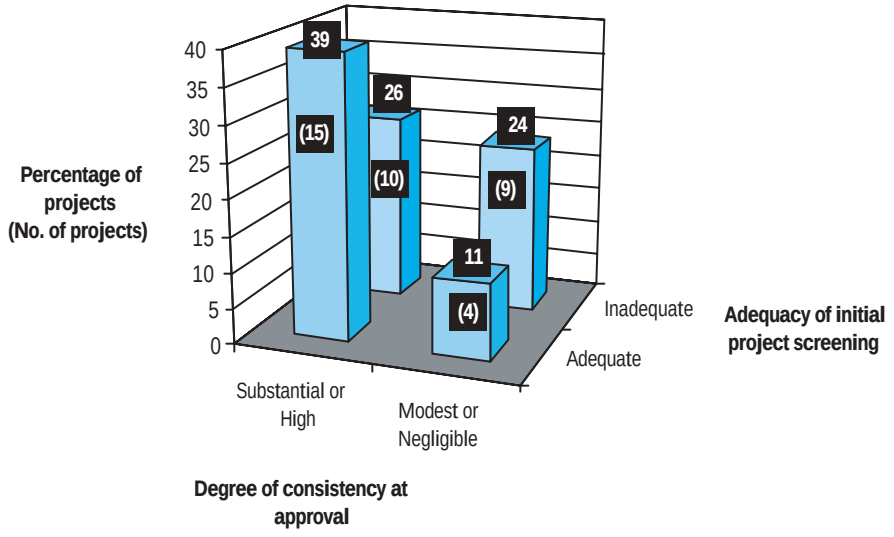
The most important inadequacies in the implementation of safeguards are associated with shortcomings at the initial project screening. Another important source of problems, and a possible explanation for the decline in safeguards implementation from approval to implementation, is inadequacies in supervision and reporting.[105]

Initial Project Screening

A major finding of the Safeguards Review is that the initial screening of projects[106] has important implications for the subsequent preparation, appraisal, and supervision of the project. In some cases, screening decisions resulted in assignment of a lower environmental category than may have been warranted.[107] This is important because less attention and fewer resources tend to be devoted to the assessment and mitigation of environmental impacts in lower EA categories.

On the other hand, not all difficulties in achieving the objectives of the safeguards can be traced to shortcomings in the initial project screening process. In fact, while 69 percent of the projects that were not substantially consistent with safeguards had been incorrectly screened, over half of the projects that had been incorrectly screened were substantially consistent with policy requirements at the approval stage in terms of the adequacy of provisions for mitigation of potential adverse impacts (see Figure C7). These findings suggest that, while shortcomings at the initial project screening are an important source of concern, these upstream

Figure C7 Initial Project Screening and Consistency with Safeguards



errors often can be overcome by appropriate efforts during subsequent project preparation and appraisal.

EA Categorization

The Safeguards Study concluded that, of the sample of 38 projects, 6 out of the 17 Category 'B' projects should have been classified as Category 'A,' and all 5 of the 'C' projects should have been 'B.' The definitions of EA categories were developed mainly for application to "investment" projects and before the social and legal safeguard policies assumed as much importance as they have in the past decade. Since the late 1980s, the Bank has been diversifying and expanding its array of lending instruments,[108] while EA categorization definitions and guidance on application of appropriate EA instruments[109] have not kept pace. The study found two major areas where greater clarity is needed:

Sectoral Adjustment Projects: Five of the six 'B' projects that should have been categorized as 'A's were SECALs involving the closure of mines.[110] While the OP 4.01 can be interpreted to allow categorizing them as 'B's, it would have been more appropriate to categorize them as 'A's, given the significant, diverse, and unprecedented cumulative impact of the mining sector on the environment and communities in the mining areas and to ensure a level of attention, normally associated with a full EA, commensurate with the degree of environmental and social impacts and risks.[111] Thus, the guidance set out in the 1993 *EA Source Book Update on Environmental Screening* recommends that Sectoral EAs be carried out for SECALs, and the 1991 *EA Source Book*[112] recommends that EIAs be carried out on each individual mine closure plan.[113] While these guidelines are not mandatory, they support the objectives of the safeguards policies, and OED has used them to underpin its assessment.

Among mining SECALs, the Poland Coal SECAL II illustrates the potential usefulness of a Sectoral EA, which, for this project, found that the damage costs of saline water discharge were not as serious as previously estimated[114] and identified land subsidence as a potential problem. It also found several shortcomings in clarity and prioritization of recommended actions in the mine-specific EIAs. Other mine-restructuring SECALs did not follow this model and therefore may have missed the opportunity for considerably more appropriate and cost-effective actions for mitigating negative environmental and social impacts.

Technical Assistance Projects: While six of the Technical Assistance projects in the sample were correctly categorized as 'A' or 'B' projects, five were incorrectly categorized as 'C.' As noted in the 1993 *EA Source Book Update on Environmental Screening, "while most technical assistance (TA) projects should fall into Category 'C'… certain TA operations are designed to pave the way for major investments or privatization.… In such cases, it is appropriate to undertake a limited review of the environmental institutional and regulatory framework for the sector and recommend improvements (as needed). Category 'B' is normally the correct classification for such projects."*[115]

The Colombia Energy TA project, a 'B,' illustrates the importance of early attention to the environmental and institutional and regulatory framework, which allowed for the preparation of a well-designed set of components to operationalize the application of the Bank's safeguard policies. On the other hand, in line with the objectives of the safeguard policies, TA projects in Cameroon, Kazakhstan, Papua New Guinea, Russia, and Zambia all should have been categorized as 'B's rather than 'C's, which resulted in less attention being given to reviewing substantial issues of environmental and social impacts that can emerge in the process of attracting major investments and preparing for privatization.

Identification of Applicable Safeguards

An important function of the initial project screening is to identify the safeguard policies that should apply to a particular project. Aside from the EA policy, the most frequently triggered safeguards in the sample of extractive industries projects relate to involuntary resettlement, indigenous peoples, natural habitats, dam safety, and cultural properties. There is a natural incli-

nation to downplay the relevance of individual safeguards in order to simplify processing of projects. Moreover, in the case of TA projects, such issues as protection of natural habitats, cultural property, and indigenous peoples, and so forth, while possibly relevant to the sector, had not been triggered when needed, as the policies have been worded to apply when "investment" projects are undertaken. This is unfortunate, as often the TA projects are helping governments to improve the regulatory system for private investments in extractive industries, for which such issues are highly relevant.

Involuntary Resettlement: Of the seven projects that should have triggered the Involuntary Resettlement policy, four had prepared comprehensive Resettlement Action Plans (RAPs), while for three of the projects the RAPs were either not prepared or inadequate. The risks associated with inadequate safeguard identification at the screening stage are illustrated by the Second Gas Transmission project in Thailand,[116] where the issue of resettlement arose very late in project preparation—so late, in fact, that it had to be dealt with at loan negotiations. At this stage it was not even certain how many people had to be relocated and how many had to be compensated for loss of income during pipeline construction or for loss of structures. While the completion document reports that the resettlement of the few families was in line with the guidelines and carried out without a problem, it also reports that problems with land acquisition were compounded by difficulties in purchasing the right-of way because of landowner lock-outs. There were also problems with squatters moving onto the pipeline route in an attempt to obtain compensation.[117] It is quite possible that problems, which happened before in earlier projects, could have been reduced through earlier identification of resettlement issues and the earlier involvement of resettlement specialists in planning for their mitigation, as would have been appropriate.

Indigenous Peoples: Three out of the seven projects for which the indigenous peoples policy applied met the requirement for preparation of an Indigenous Peoples Development Plan (IPDP). A good example of an IPDP was prepared for the Bolivian section of the Bolivia-Brazil Gas Pipeline project. Under this plan, indigenous peoples' land rights were established through land titling, and communities were supported in developing sustainable resource management practices. A trust fund of US$1 million was also established for protection and management of the Kaa-Iya National Park, which is co-managed by an indigenous NGO and Bolivia's National Protected Areas Agency.

Natural Habitats: Three of the five projects in which the Natural Habitats policy applied met the requirements of this policy. For the Chad-Cameroon Pipeline project,[118] alternative corridors for the pipeline were assessed and alignment of the pipeline within the preferred corridor was optimized from cost, technical, safety, environment, and social perspectives. In addition to aligning the pipeline to follow existing infrastructure and/or traverse degraded land to the extent possible, because of the proximity of the right-of-way to areas of important natural habitat in Cameroon, biodiversity impact mitigation measures included two environmental offsets—one for the semi-deciduous forest and one for the Atlantic Littoral forest.

Supervision, Monitoring, and Consultation

Other issues that emerged from the Safeguards Review relate to the (a) adequacy of supervision inputs and reporting, (b) management and/or action plans that were prepared, (c) adequacy of provisions for monitoring and evaluating environmental and social impacts, and (d) provisions for disclosure and stakeholder consultation.

Supervision Inputs and Reporting: The study found that in only 41 percent of the sample projects, the task teams had adequately supervised and reported the implementation of safeguard policies. About 30 percent of the projects (all of which were likely to have adverse impacts) included environmental or social specialists in at least one supervision mission, which is about half the level projected in the supervision plans

prepared at appraisal.[119] Frequent changes in task teams, especially task leaders, and the lower managerial attention and resources devoted to safeguards supervision in incorrectly screened and categorized projects also contributed to the modest intensity of safeguards supervision, as reflected in infrequent and inadequate reporting on safeguard policy matters in aide-memoires, supervision reports, and completion reports.

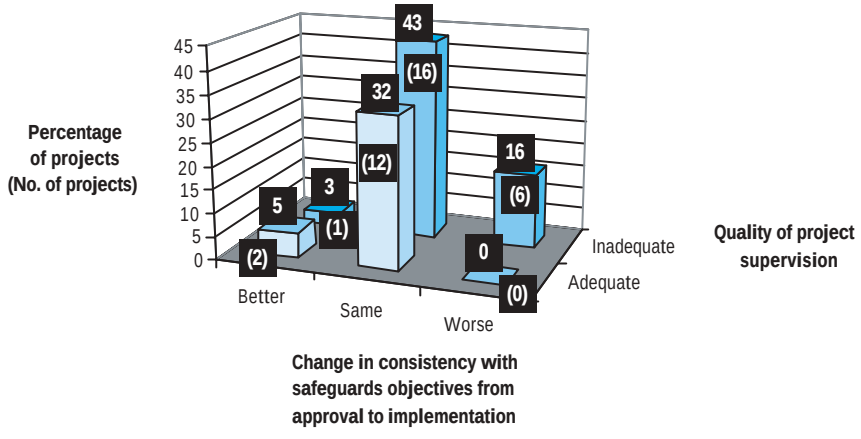
These issues are important because they account for the entire slippage in the projects' consistency with safeguards from the approval to the implementation stage. Thus, for about a quarter of the 23 projects for which supervision inputs and reporting were inadequate, the consistency with safeguards deteriorated during implementation. On the other hand, of the 14 projects that were supervised adequately, not a single one failed to meet the safeguard objectives, and two previously inconsistent projects (14 percent) became substantially consistent with safeguards during implementation (see Figure C8).

The oversight and reporting of safeguards compliance and EMP implementation can be only as effective as the environmental and social monitoring reporting system provided for under the projects. Since these were found to be deficient in nearly half of the projects reviewed, the implementation of safeguards is a serious weakness in the oversight system

Environmental and Social Management and Action Plans: The basic instruments that the Bank safeguard policies rely on for implementation of environmental and social mitigation measures are the EMPs, RAPs, and Indigenous Peoples Action Plans (IPAPs). The review found that EMPs are being prepared to an appropriate standard for 93 percent of the 'A' projects but only 60 percent of the 'B' projects. Because the EA policy leaves the decision on the scope of EMPs to the judgment of Bank staff, this would likely have been less of a compliance problem if the projects had been assigned to their proper EA category at the screening stage, with attendant availability of more resources for specialist staff to help define and supervise the EMP. Similarly, about half of the sample projects that involved involuntary resettlement and affected indigenous peoples did not have comprehensive and implementable RAPs and IPAPs, largely because the relevant safeguards had not been triggered at the initial project screening.

Monitoring and Baseline Surveys: An important requirement, often overlooked, is that of monitoring and evaluating safeguard compli-

Figure C8 Adequacy of Project Supervision and Change in Consistency with Safeguard Objectives



line surveys have been prepared before project implementation, as was done for about half of the 'A' projects in the sample.[121]

Public Disclosure, Consultation, and Participation: Bank policy expects the borrower to consult affected groups and local NGOs for all Category 'A' and 'B' projects, to disclose relevant EA materials, and to incorporate their legitimate concerns into project designs. The requirements are somewhat more rigorous for 'A' than for 'B' projects. The Safeguards Review found that public consultation in the EA preparation process had been substantially addressed in 73 percent of the 'A' projects in the sample and 38 percent of the 'B' projects. Stakeholder participation, in terms of opportunities to influence and share control over development initiatives, decisions, and resources, is not required under Bank policy and has been attempted in only a few projects.

Here again, the 'B' projects appear to have had fewer resources than necessary to devote to this area. The ICRs of several 'B' projects where consultation took place noted the importance of stakeholder consultation. OED's assessment of a 'B' project in Ecuador, in which full public consultation only started five years into implementation, concludes that the projects and programs involving natural resources extraction need to be managed carefully and proactively. Effective communication, consultation, and stakeholder participation strategies need to be designed early during preparation and maintained throughout implementation.

Beyond consultation, the Bolivia-Brazil Gas Pipeline project offers an excellent model for establishing a participatory safeguards compliance monitoring, evaluation, and reporting framework. The completion report notes that continuous dialogue and exchange of information between the local communities and civil society representatives and the environmental inspectors, environmental auditor, and ombudsperson was an important feature of the on-site supervision of environmental and social concerns. This process allowed a growing understanding of the concerns of each of the stakeholders, the identification of new issues, better monitoring of the performance of social compensation programs in the field, and, more important, an improvement of the environmental inspection/monitoring system, which resulted in a better definition of roles and functions for the contractor environmental field inspectors, the environmental inspection team and management unit independent from the contractor, and the independent environmental auditor and ombudsperson.

Beyond Safeguards: "Doing Good"

An important aspect of the Bank's approach to development assistance involves the pursuit of positive environmental and social impacts beyond strict compliance with safeguards, such as the remediation of pre-existing conditions resulting from past mining and petroleum activities and the strengthening of the policy and institutional framework to promote the implementation of safeguards across the entire economy. Many extractive industries projects have such objectives and components.

Addressing Pre-existing Environmental Conditions

Environmental Rehabilitation: Nine completed projects (oil and gas: 5; mining: 4) provided assistance for addressing environmental impacts from past or ongoing extractive industries activities, while other completed projects approached them as part of larger efforts in economic transition. Based on the generally limited information provided in the ICRs, pre-existing environmental conditions appear to have been addressed in a moderately satisfactory or better manner, in all but two cases (see Box C7).

Pre-existing environmental impacts tended to be given less priority in countries where the sector faced poor economic and financial conditions, where the priority was to restore production levels and earn import revenues, and where the mitigation components were a relatively small part of the project. All these factors were evident in Russia's Oil Sector Rehabilitation I and II projects as well as in Coal SECAL I and II projects. In countries where the eco-

Box C7 World Bank Projects and Pre-existing Environmental Impacts

In the oil and gas sector, the efforts included controlling drilling wastes and reducing environmental impacts from oil and gas operations (Russia); controlling and mitigating pollution from refinery activities (Thailand); controlling pollution from leaking pipes and storage facilities (Tanzania); and addressing the impact of petroleum development in an area of extreme environmental sensitivity near the Caspian Sea (Azerbaijan).

In the mining subsector, pre-existing pollution issues included water and air pollution from mine tailings and airborne particles (Guinea, Peru, Poland, and Mongolia); environmental impacts on surrounding communities (Ghana, Russia); contamination from activities of artisanal and informal miners (Ecuador, Peru); a strategy to control widespread mine fires that were affecting local infrastructure, farmland, and habitation and could potentially dislocate hundreds of thousands of people in the Jharia coalfields (India); and passage of a new environmental code for mining to ensure cleanup of existing pollution and rigorous guidelines for new foreign investors (Peru).

The efforts in Tanzania and Thailand yielded positive results, and good progress was made in Peru, where contamination levels were reduced by 15 to 20 percent, and in Poland, where saline water and solid discharge from coal mines were reduced by 21 percent and 29 percent, respectively. Under the Mongolia Coal project, a beginning was made by establishing an Environmental Management Unit. In Guinea, environmental audits of all mining operations were carried out. Ghana's project made some headway in reclaiming three pilot areas reclaimed and launched a "green communities" plan.

Source: Portfolio Review.

nomic and financial situation was better (Poland's Hard Coal SECAL I and II) and in cases where environmental components were larger relative to the entire project (Mongolia Coal project) and where stakeholder participation was higher (Tanzania Mineral Sector Development TA), there was greater progress indealing with pre-existing environmental impacts.

Social Rehabilitation: Important coal mine rehabilitation projects in Poland, Russia, and Ukraine substantially achieved their mine closure objectives, but the results on the social front have been mixed. The greatest difficulties were in generating alternative employment for workers who lost their jobs in the rehabilitation and mine closure process. The difficult economic transition in Russia and Ukraine made it very hard to generate alternative employment, and it is not clear if these issues were addressed through projects in sectors other than the extractive industries. Another area of concern was finding alternative funding sources for social services that previously had been provided by the state mining enterprises. These issues are important because the process by which employment reduction is handled is crucial for the acceptance by the mining communities of economically necessary mine closure programs.

Capacity-Building and Reform for Environmental and Social Management

Components in support of capacity-building, institutional development, and policy reform for environmental management were part of 16 completed and 9 active projects. Most of the activities were completed satisfactorily. For many of these efforts the impacts are not evident from the ICRs, perhaps because results may be realized only in the long term. Projects in three countries—Burkina Faso, Madagascar, and Mauritania—aim to improve capacity for environmental management in their mining sectors. Burkina Faso's Mining Capacity-Building project seeks to establish capacity for environmental management. The Madagascar Mining Sector Reform project will establish capacity in the country by means of pilot projects to identify and address environmental as well as social impacts from mining. The Mauritania Mining Sector

Capacity project has an Environmental Management System to include capacity-building at the Ministry of Mining and Industry, for monitoring and enforcing environmental regulations.

Capacity-building for environmental and social management represents a valuable contribution by the Bank to client countries at a relatively low cost. While it is too early to judge the impacts of these project components in many cases, indications are that most of the changes are sustainable, especially in countries that already had a reasonable level of institutions and human resources in these areas. The Bank's cross-country experience also helped client countries to learn from other countries facing similar environmental situations. The number of efforts to build capacity for environmental management in extractive industries projects appears to be increasing.

Other Environmental Benefits from Extractive Industries Projects

In the portfolio of 48 completed projects, 5 projects produced other miscellaneous environmental benefits. Under Brazil's Gas Sector Development project, the creation or improvement of 13 national parks was initiated. This project, as well as Thailand's Gas Transmission I and II projects, made available larger amounts of environmentally acceptable fuel—natural gas—and, along with Thailand's Clean Fuels and Environmental Improvement, had consequent benefits for air quality and health. Bosnia-Herzegovina's Natural Gas System Reconstruction project helped reduce environmental pollution through rehabilitating war-damaged gas distribution systems.

Missed Opportunities in Addressing Adverse Impacts

The survey of Bank staff followed up on a recent Quality Assurance Group (QAG) Quality-at-Entry Assessment, which noted, "in numerous interviews with task teams, panelists detected an aversion to including project components that may trigger safeguard policies, …[and]…that it was too risky to design operations with significant social safeguard issues."[122] Thus, the survey asked if the WBG has avoided good projects in the EI sectors due to concerns related to safeguards policies. The majority of respondents agreed that this has been the case, particularly in response to concerns originating from WBG management (86 percent) and WBG task managers (56 percent), rather than client countries (22 percent) or private investors (40 percent). This response suggests that the WBG is missing opportunities to help its clients address adverse impacts in the sector mainly because of an internally generated aversion based on the significant costs and risks associated with its safeguard policies.

Conclusions

The Safeguards Review of a sample of extractive industries projects most likely to face environmental and social challenges found the majority to be substantially consistent with applicable safeguard policies, but the degree of consistency is below the expectation that Board-approved policies will be implemented as a matter of routine.[123] The degree of consistency varied greatly depending on the phase of project cycle and the environmental category of the projects. The degree of consistency appears to have improved modestly over time. The review also found that supervision inputs for and reporting of safeguards compliance had been adequate for less than half of the projects.

The most important shortcomings with regard to the implementation of safeguards can be traced to inadequacies in the initial project screening. Another important source of problems was inadequacies in supervision inputs and reporting. Inadequate attention to compliance during project implementation also is reflected in the fact that environmental and social specialists were involved in supervision in only about 30 percent of the sample and that fewer than a quarter of the project completion reports discuss this subject.

While the validity of these findings is limited to the sample of projects that was reviewed, some of them may be helpful for strengthening the Bank's safeguards framework, which is no different for extractive industries than for other types of projects.[124] In particular, the findings point to the need for clearer and more consis-

tent guidance for the categorization of sectoral adjustment and technical assistance projects; the identification of applicable safeguards at the initial project screening; the appropriate scope and arrangements for monitoring of safeguards compliance during project implementation, including the preparation of comprehensive baseline surveys at the start of the project; and the reporting and evaluation of results at project completion. Improvement would be of particular importance to the extractive industries portfolio, given its large share of sectoral adjustment and technical assistance projects, the inadequacies in monitoring and reporting, and the controversy surrounding the sector's environmental and social impacts.

On the other hand, the Bank's safeguards policies have received wide acceptance, even for projects where the Bank is not involved, which points to the potential for the Bank to continue building on its global mandate and convening power for catalyzing good practice in respect to safeguards and other issues. Beyond compliance with safeguards, the Bank's efforts at "doing good" by addressing environmental legacy issues and building capacity for the management of environmental and social impacts have yielded mostly satisfactory results. These appear to be areas where the Bank should continue to make a valuable contribution to the development of resource-abundant countries.

5. From Resource Revenues to Sustainable Development

From a country development perspective, the most important component of the economic benefits from extractive industries is usually the flow of revenues that can be used for growth-promoting public expenditures.[125] This chapter assesses the Bank's efforts to integrate the incremental revenues from resource extraction into the countries' overall development strategy through improved fiscal management and expenditure policies.[126] While the potential for major fiscal revenues is generally greater from the petroleum than the mining sector, it is useful to discuss them together in light of their shared characteristics of volatility and exhaustibility.

Linking Extractive Industries Sector Development to Overall Country Assistance

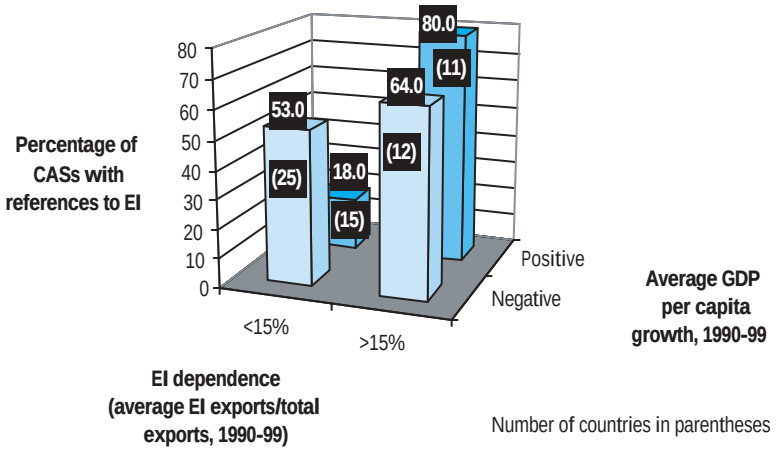
The management of EI revenues cannot be isolated from the larger context of economic management. In a resource-rich country, EI revenues deserve special attention because of their importance to the economy and their concentration in a few sources, which affords greater scope for rent-seeking. Hence, an assistance strategy for a resource-abundant country must not only recognize the specific issues involved in managing EI revenues but also chart their linkages with the broader management of the country's development.

A review of the World Bank's most recent CASs[127] found that 64 percent of those for poorly performing EI-dependent countries[128] recognized one or more issues related to the management of EI revenues (see Figure C9).[129] The issues spanned a wide range, including managing of volatility and exhaustibility of EI revenues (Azerbaijan, Mongolia), achieving macroeconomic stability (Gabon, Trinidad, and Tobago), public expenditure policies for EI revenues (Bolivia, Chad), transparency in handling EI revenues (Kazakhstan, Papua New Guinea), diversifying of economic activity (Nigeria, Zambia), and reducing subsidies to the EI sectors (Russia).

In general, the mention of EI revenue issues in a CAS does not appear to translate readily into developmental interventions by the Bank. The dearth of follow-up interventions could be related to the relatively low level of Bank involvement in poorly performing EI-dependent countries. World Bank lending per capita over 1990–99 was significantly lower (at US$47) for poorly performing EI-dependent countries than for better-performing EI-dependent countries (US$80) or poorly performing non-EI-dependent countries (US$61; see Figure C10). While this is a consequence of the Bank's country policy and institutional performance-based allocation of IDA credits, there is no indication that the shortfall in lending has been mitigated by nonlending interventions, such as economic and sector work, as would seem desirable in light of these countries' needs[130] (see Box C8).

For a more in-depth assessment of the Bank's involvement in the revenue management issues

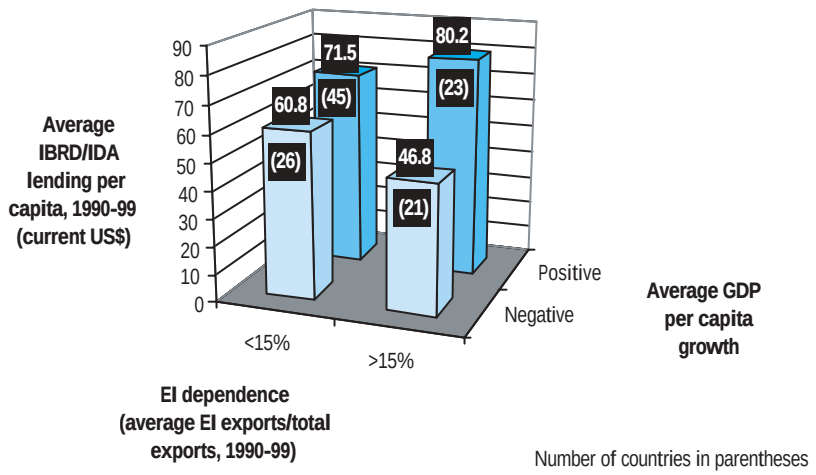
Figure C9 Percentage of Countries Whose CAS Refers to EI Issues



of EI-dependent countries, the Revenue Study reviewed CASs, Country Assistance Evaluations (CAEs), project documents for EI and other sectors, and adjustment lending and Public Expenditure Reviews and other documents for five EI-dependent countries: Bolivia, Ecuador, Ghana, Kazakhstan, and Papua New Guinea.[131]

The study found that in all five countries, governance was the key to successful management of EI revenues and fed into the quality of revenue distribution and utilization, as well as attempts at economic stabilization and diversification. Ecuador and Ghana lacked the political will and the fiscal discipline to maintain macroeconomic stability, putting other reforms in jeopardy. Kazakhstan and Papua New Guinea showed little institutional development or commitment to governing openly or fairly. Only in Bolivia did the government show a commitment to managing its revenues within the con-

Figure C10 IBRD/IDA Lending per Capita (number of countries)



Box C8 Analytical and Advisory Activities in the EI Sectors

The Bank has engaged in a variety of analytical and advisory activities (AAA) in the EI sectors, including economic and sector work (ESW), as well as sponsoring meetings, conferences, and workshops for stakeholders.

None of the AAA in the EI sectors has been evaluated through either self-evaluative Activity Completion Summaries[a] or the annual reviews of ESW by the QAG from 1998 to 2001. However, some reporting in the ICRs, as well as in country case studies prepared for this evaluation, gives an idea of the integration of representative AAA with project preparation.[b]

In Papua New Guinea, the Bank has provided a range of ESW on many occasions since the 1980s in the mining sector, and it undertook reviews of environmental issues in 1992 and again in 2000 that provided input into the mining TA project. The Argentina Mining Sector Review (1993) helped improve the quality of project preparation for the country's Mining TA and Mining Sector Development TA projects. In Ecuador, the Bank assisted the government in the preparation of a Mining Sector Policy and Strategy Paper in 1990 (updated in 1993) stressing the need for legal and institutional reform to attract private sector investment in the sector and to address environmental impacts of artisanal and small-scale mining.

Other illustrative publications from the oil and gas sector on institutional development and policy issues include *Legislative Frameworks Used to Foster Petroleum Development* (1995), *Management of Oil Windfalls in Mexico: Historical Experience and Policy Options for the Future* (2001), and *Does Mother Nature Corrupt?—Natural Resources, Corruption and Economic Growth* (1999).

In the mining sector, several country-level sectoral reviews have been prepared, among them the *Kyrgyz Republic: Mining Sector Review* (World Bank 1994a), *Russian Federation: Restructuring the Coal Industry: Putting the People First* (World Bank 1994b), *Kazakhstan: National Gas Investment Strategy Study* (ESMAP 1997), and *Ecuador—Public Sector Reforms for Growth in the Era of Declining Oil Output* (1991). *A Mining Strategy for Latin America and the Caribbean* (Van de Veen et al. 1996) and *Strategy for African Mining* (World Bank 1992) spell out strategies for boosting private investment in the regions.

a. At least since 1998, the Bank has required Activity Completion Summaries to be prepared for all ESW with a budget of $50,000 or above, within six months after "delivery to client." In AFR, there is no threshold, and in ECA it is $15,000.
b. A detailed list of ESW by the Bank in both the oil and gas sector and the mining sector is included in the Bibliography annexed to the Portfolio Review.
Sources: Country Case Studies; World Bank.

text of overall public finance management, but even Bolivia is having difficulty maintaining fiscal discipline. The Revenue Study also found that desirable structural reforms were slowed in the face of large resource flows from resource extraction (see Box C9).

The Revenue Study also found that while economic diversification through directing public expenditure toward socially profitable investments is necessary for the sustainable development of EI-dependent countries, this approach is difficult to promote in the face of poor governance. Bolivia successfully developed agriculture in the lowlands but at the cost of additional environmental damages that are difficult to control. The Bank and the government showed clear commitment to develop agriculture in Papua New Guinea, but after 10 years of assistance the strategic options for stimulating agriculture have yet to be developed. Ghana had difficulties in developing agriculture and streamlining cocoa production management, and competition between mining and agriculture for arable land continues to be an important issue. The Bank advised Kazakhstan that efficient management of the National Oil Stabilization Fund and better management of public finances in general were preconditions for promoting economic growth in the nonextractive industries sectors, but governance of the oil fund and of public finance continue to be difficult problems. Ecuador's poor management of public expen-

Box C9 EI Revenue Management and Macroeconomic Performance: Some World Bank Country Experiences

The World Bank has assisted several EI-dependent countries in reconciling EI revenue management with broader macroeconomic management. In most cases the outcomes have been less than satisfactory.

In Ecuador, in the 1990s, the Bank identified constraints to macroeconomic performance as the major negative effect of the decline in oil revenues and their mismanagement, but it failed to develop a more comprehensive strategy to isolate the economy from volatility and exhaustibility of the resources and to share oil benefits. Though the Bank provided financial assistance to sectoral rehabilitation and macroeconomic stabilization, the expected reforms were not implemented, and export and fiscal revenues went to finance highly inefficient public expenditures. Overall, the Bank had a very limited influence on how oil revenues were managed to promote macroeconomic stability and social equity.

In Ghana, during the 1990s, the Bank supported efforts for better financial management and civil service reform, but OED's CAE of 2000 found these efforts were only partly successful. Many shortcomings remain in the overall quality of Ghana's public governance, as illustrated by politically motivated spending on public sector wage increases and consumer subsidies before each election in 1992, 1996, and 2000. These increases led to persistent macroeconomic instability with negative consequences for investment and growth.

In Kazakhstan, an inflow of petroleum revenues created prosperity that began to produce symptoms of the Dutch disease and reduced commitment to overall reform, to the point that the country has forgone sound advice from the World Bank regarding the management of EI revenues.

In Papua New Guinea, private investment in the EI sectors created some prosperity in the early 1990s, after which the government discontinued reforms, which precipitated a financial crisis. Subsequently, the WBG supported a new government effort to restore macroeconomic stability and initiate structural reform, with emphasis on governance and economic diversification. But macroeconomic mismanagement continued, compounded by political uncertainty and poor transparency and accountability, forcing the Bank to suspend the second tranche of a structural adjustment loan.

In Bolivia, WBG strategy in both hydrocarbons and minerals had great success in generating revenues, helped in large measure by the country's own "capitalization" program. However, public expenditure management in the country is still weak, and Bolivia has not responded well to several WBG technical assistance and structural adjustment operations targeted at public finance management, civil service reform, customs administration, and judicial reform.

Sources: Revenue Study; Country Case Studies.

ditures is the core cause of the continuous financial crises the country faced in the 1990s, and it is still excessively dependent on oil exports. In general, while the World Bank supported diversification in all these countries, it has not been able to address these diversification issues with any clarity, and the efficacy of its interventions has been low.

Overall, the Revenue Study concluded that the relevance of the World Bank's interventions for revenue management in the EI sectors had been modest for Ecuador and Kazakhstan, substantial for Papua New Guinea, and high for Bolivia and Ghana. The study rated the efficacy of interventions as negligible for Ecuador, Kazakhstan, and Papua New Guinea, modest for Ghana, and substantial for Bolivia.

Managing Volatility and Exhaustibility of Revenues

Fewer than half the CASs for EI-dependent countries (12 out of 26) recognized the importance of dealing with volatility and exhaustibility of revenues from the EI sectors. These CASs identified broad approaches to dealing with the issues: creating a windfall fund and encouraging growth outside the oil sector (Gabon); offshore funds (Kazakhstan); longer-term strategy of fiscal management of copper revenues and diversifying exports (Mongolia); developing a strong private

sector in industries other than oil (Azerbaijan); creating an oil stabilization fund (Colombia); and keeping a sizable reserve cushion (Chile).

In two CASs a clear link was found among issues relating to volatility and exhaustibility of EI revenues, appropriate policy dialogue, and a lending/nonlending program to address them: The Papua New Guinea CAS addresses the country's vulnerability to external shocks and suggests enhancing macroeconomic stability through appropriate policy dialogue and a structural adjustment loan. The Kazakhstan CAS addresses the volatility inherent in commodity-led growth by proposing careful management of oil revenues, reflected in lending for public sector resource management and structural adjustment, as well as nonlending initiatives.

A general review of experiences with savings and stabilization funds, with or without Bank intervention, as well as recent analytical work, suggests that the experience with such funds has been mixed, with the few important successes coming from countries with a strong history of fiscal prudence (Botswana, Chile). Without such a history, the integration of resource funds with overall fiscal policy has proved problematic, and the stabilization of expenditure has remained elusive (see Box C10).

Revenue Generation

Project components designed to help resource-dependent countries improve the generation and accounting of fiscal revenues from resource extraction were included in 10 of the completed projects in the portfolio. These components focused on improving the capacity of governments to negotiate with investors and on upgrading accounting procedures to international standards.

Six of the completed Technical Assistance Loans helped to improve negotiating capacity and four others helped upgrade accounting procedures. Three projects, in Georgia (Oil Institution Building TA), Papua New Guinea (Petroleum Exploration TA), and Peru (Peru's Energy/Mining TA), helped build negotiating capacity through improved data collection and economic analysis for exploration and development. Capacity was developed in Russia for working with foreign suppliers and organizing bidding (Oil Sector

Box C10 How Effective Are Resource Funds?

A number of EI-dependent countries have responded to the prospect of volatility and exhaustibility of EI revenues by setting up petroleum, resource, or future generations funds, with the objectives of maintaining fiscal discipline, achieving overall macroeconomic stabilization, or saving for future generations. These attempts have been mostly unsatisfactory.

Papua New Guinea's Mineral Resource Stabilization Fund of the 1970s was depleted by withdrawals and excessive public spending and was finally used up in 1999 to retire debt that had then reached 25 percent of GDP. Ghana's Mineral Fund is a source of controversy because its recipients, both mining communities and the Ministry of Finance, have mishandled its system of resource-rent sharing. Kazakhstan's National Oil Stabilization Fund, created in 2001 to reduce the negative impact of oil revenues on the domestic economy and provide for the welfare of future generations, has yet to evolve rules for transfer of funds and establish spending priorities and has already been criticized for misuse of funds. The Petroleum Stabilization Fund established by Ecuador in 1990 turned into an additional source of revenue to finance regular budgetary expenditures. In Equatorial Guinea, the government has established a Future Generations Fund in its overall scheme for the use of anticipated petroleum revenues, but no significant amounts have been deposited.

In general, the same elements of disciplined economic management are needed to make a success of a resource fund as are needed to run an economy effectively. Thus, recourse to resource funds is unlikely to yield better results than pursuing equitable distribution and effective utilization of EI revenues through sound fiscal policies.

Sources: Country Case Studies; Davis et al. 2001; World Bank.

Rehabilitation I and II projects) and in Equatorial Guinea (Petroleum TA project) for maintaining a dialogue on long-term development plans with oil companies.

Four completed projects supported the adoption of international accounting practices by state enterprises for improving transparency and compatibility with foreign investors: Azerbaijan's Petroleum TA with respect to the State Oil Company of Azerbaijan, the Mongolia Economic Transition Support project for the planning and restructuring of operations of the ERDENET copper mine, and Thailand's Gas Transmission I and II projects with respect to the Petroleum Authority of Thailand. The results are reported to have been satisfactory.

Efforts to improve capacity for negotiating with private investors and for adopting international accounting practices have yielded generally favorable results, mainly because the client governments and implementing agencies recognized the immediate benefits of attracting higher private investment and gaining more favorable contractual terms. The lesson is that where such conditions are stipulated, these project initiatives seem to be straightforward and effective.

Revenue Distribution

A distribution of EI revenues among federal, state, and local governments that is broadly acceptable and sustainable to key stakeholders is critical for converting the revenues into sustainable development and poverty reduction. In general terms, an acceptable distribution of revenues is one that is consistent with national developmental priorities, subject to (i) entitlements of legal, customary, and traditional owners of resource rights, and subnational units of the government, as recognized under national laws and (ii) compensation for negative environmental and social impacts. An additional negotiated premium to local communities and governments also may be appropriate, depending on national priorities. While the perception of equity will vary, the experience of several countries shows that it is important that none of the claimants gets an excessive share, poor governance does not constrain the actual transfer of funds, and there are clear regulatory provisions for using the funds in the intended manner (see Box C11).

Issues relating to distribution of revenues among owners of resource rights and different levels of government figured in six of the completed projects in the portfolio—with largely satisfactory outcomes—and two active projects relating to the Chad-Cameroon pipeline. The six completed projects—in Bolivia, Papua New Guinea, and Russia—contained provisions for distribution of revenues from resource extraction to meet entitlements, compensation, and other national priorities. Of the six projects, four had satisfactory outcomes in terms of achieving their distributional objectives.

Revenue Utilization

Developmentally efficient use of EI revenue can stimulate broad-based and sustainable economic development that goes beyond the EI sectors. Approaches to better use of EI revenues are discussed in CASs for 6 out of 26 EI-dependent countries. The approaches include improving capacity for public finance management and developing a strategy for poverty-oriented use of revenues (Chad), resisting the unwise expenditure of oil revenues (Azerbaijan), managing resource rents effectively (Mongolia), and directing revenues toward sustainable use (Kazakhstan). Once again, there is little evidence in the CASs of lending or nonlending activities that follow directly from these discussions. Only three active projects relating to the Chad-Cameroon pipeline contain explicit provisions for allocating fiscal revenues from extractive industries (see Box C12).

Coordination across the World Bank Group

Aside from serving as an instrument for integrating activities within the Bank, the CAS is expected to strengthen coordination and cooperation between the Bank and IFC/MIGA. However, the review of CASs of EI-dependent countries found that, while the discussion of linkages with the Bank's EI activities has been very modest, the EI activities of IFC and MIGA are not always mentioned, even in joint CASs.[132] In response to a survey question about the coor-

Box C11

Distribution of Extractive Industries Revenues—Striking the Right Balance

Striking the right balance in distribution of EI revenues involves many complex issues and needs firm institutional arrangements and provisions for consultations among stakeholders to arrive at equitable and sustainable arrangements.

The government of Papua New Guinea (GOPNG) has handed over a greater share of the resource rent to the provincial governments and landowners since pioneering an innovative Development Forum in 1989 to represent their interests. In a recent project, GOPNG ceded 30 percent of its equity to the landowners, though the 1998 Oil and Gas Act had established a cap of 20 percent. Neither side has demonstrated effective use of these resources, and the distribution of revenues has not yet been settled to everyone's satisfaction.

In Equatorial Guinea, all oil revenues accrue to the central government, which exclusively decides their allocation, though local municipalities are deeply affected by the oil economy. In Chad, just under 5 percent of anticipated oil revenues are allocated to the local authorities in the oil-producing region and 70 percent to poverty sectors throughout the country (including the oil-producing region).

The experiences of Nigeria and Peru illustrate how revenue distribution can go awry for lack of proper implementation and proper regulatory mechanisms. In Nigeria, federal revenues, predominantly from oil, appear to be reasonably shared among the federal government (49 percent), state government (24 percent), and local government (20 percent). In practice, these shares are not realized because of prior appropriations, which are taken off the top, effectively reducing the share of state and local governments, making the issue one of actual implementation and quality of governance rather than a lack of appropriate constitutional provisions. In Peru, since 2001, the law requires a 50 percent of mining profits taxes to be plowed back into local communities. Yet few of these funds appear to reach the communities, primarily because the federal government retains them to pay ancient debts.

In Ghana, the constitution explicitly reserves all mineral rights for the state. Nevertheless, public sentiment has favored local communities receiving a direct share in royalties paid to the government of Ghana by mining companies. As a result, the government set up a Mineral Development Fund (MDF), which restored a traditional practice of payments to custodians of the mining land. The MDF receives 20 percent of all mining royalties, of which 9 percent goes to mining communities, which in turn is subdivided between local authorities. The other 11 percent goes to mining sector institutions and mineral-related investment projects. In practice, however, the discretion given to the Ministry of Finance in handling the MDF together with the lack of clear expenditure guidelines for the local authorities has resulted in little benefit to the local communities.

The distribution of oil rents in Ecuador is considered the most centralized and least transparent of the four Andean countries (ESMAP 2000). Over 1995–2000, an average of 90 percent of available oil rents was assigned to the central government and its institutions, 62 percent to the central budget, 7 percent to the armed forces, and 23 percent to the universities. Producing provinces and municipalities averaged 1.2 and 2.4 percent, much below the Andean countries' average of 18.9 percent and 9.5 percent. Although a large share of local government resources come from other central government transfers, they account for less than 1 percent of central government expenditures.

Sources: **Country Case Studies; World Bank.**

dination across the WBG on important issues affecting the EI sectors, 52 percent of Bank staff and 100 percent of MIGA, but only 48 percent of IFC staff, responded that it was adequate. In response to a question about factors that constrain the WBG's ability to help client countries enhance the contribution of the EI sectors to sustainable development, Bank and MIGA staff tended to point to the inadequate linkage between EI activities and sustainable development (50 percent and 56 percent, respectively, versus 42 percent of IFC staff), while IFC staff

Box C12

Applying Extractive Industries Revenues to the Right Developmental Priorities

Issues related to use of EI revenues are intertwined with those of public expenditure policies. However, depending on the relative importance of EI revenues and the nature of developmental and macroeconomic priorities, sector-specific strategies need to be devised.

In Papua New Guinea, a large proportion of EI revenues went toward nonproductive uses in the 1990s, a period of poor economic growth for the country. This was due to inadequate institutional capacity as well as government preoccupation with macroeconomic imbalances, which distracted it from the scope and quality of public expenditure. Since 2000 the government of PNG has been consciously redirecting recurrent expenditure toward development projects.

In Equatorial Guinea, after a long period of poor economic growth, there have been visible signs of infrastructure improvements since 1995 that support the oil and the associated service industry and access roads in agricultural areas. The investment budget—which reflects a 1997 commitment to give priority to essential infrastructure and to alleviate poverty through investments in social services and agricultural diversification—is allocated among administration (20 percent), the productive sectors (13 percent), health (10 percent), education (15 percent), and infrastructure (32 percent). While the allocation appears appropriate for Equatorial Guinea's development needs, much needs to be done to develop the capacity of the sector ministries to implement such a large investment program efficiently.

In Bolivia and in Ghana, EI revenue enabled the government to increase spending on social programs and begin to alleviate poverty, but poverty remains entrenched in both countries. In Ecuador and PNG, poverty alleviation is an even more distant hope. In Kazakhstan, poverty assessments were undertaken only in the late 1990s, and their conclusions have been incorporated into World Bank strategy, but the Bank has little leverage after abundant oil revenue reduced the government's commitment to reform.

Chad's ongoing Petroleum Revenue Management project contains a detailed Revenue Management Plan that allocates prospective revenue from petroleum projects to poverty-related sectors such as education, health, rural development, and infrastructure (70 percent), civil sector operation expenditure (15 percent), a future generations account (10 percent), and a supplement to the producing region (5 percent). Capacity-building and institutional arrangements for transparent allocation and utilization are in process.

In Ecuador, a Bank review concluded that most of the country's oil capital was being used to finance government consumption, including widespread overstaffing in the public sector, growth in inefficient public enterprises and low levels of non-oil taxation, and high levels of subsidies for petroleum.

Source: Country Case Studies.

pointed to the inadequate level of support from the Bank's Country Departments and Country Management Units (55 percent versus 52 percent of Bank staff and 29 percent of MIGA staff). These findings also point to a need for greater integration of EI sectoral and macro interventions in the Bank's assistance strategies, especially for IFC activities.

Conclusions

At the country level, the majority of CASs in EI-dependent countries recognized one or more issues related to the management of fiscal revenues from resource extraction, but in only a few instances was the discussion linked to specific interventions to address them. Also, the Bank's overall lending to EI-dependent countries experiencing negative growth has been substantially lower than average, with no indications of compensating non-lending interventions[133] and no evaluative evidence on the results of such interventions. A desk review of Bank interventions in five EI-dependent countries found that governance was the key to the successful management of EI revenues and fed into the quality of revenue distribution and the efficiency of its use in support of broad-based and sustainable development.

The CAS review and the staff survey findings point to a need for greater integration of EI sectoral and macro interventions in the assistance strategies. The evidence suggests that only half of WBG staff believed the actual level of coordination to be adequate , with inadequate linkages between EI activities and sustainable development and inadequate support from the Bank's country units emerging as the main areas for improvement. The joint CAS process, which has not been much used in EI-dependent countries, would appear to be an important instrument to achieve integration.

Taken together, these findings suggest that, while the Bank has been reasonably effective in the few cases when it addressed revenue generation and distribution issues at the project level, it has yet to formulate and implement a strategy to consistently transform resource rents into sustainable development, particularly in the most poorly performing EI-dependent countries where the need is greatest. If the Bank is to have a more effective role in such countries, it will likely require government commitment as well as the full leverage of the Bank to achieve both sound fiscal management and a supportive governance framework. The best place to clarify the linkages between resource rents and sustainable development is the CAS, which can then be used to guide the design of specific projects and the monitoring and evaluation of results.

The strategic approach needs to ensure that project-specific interventions are effectively integrated with a macro-level effort to manage the revenues for sustainable development. Projects and analytical and advisory activities to strengthen policies and institutions to ensure that the management and use of EI revenues is efficient and transparent should play a major role. Projects to close uneconomical mines and mitigate pre-existing environmental and social conditions, including the integration of artisanal and small-scale mining within the formal sector, also will be important where such problems exist. Projects to establish a legal and regulatory framework that is appropriate, stable, and consistently enforced and that will facilitate the privatization of ongoing activities also should be expected to make a major contribution. Where the Bank can be confident that the incremental revenues will support sustainable development, it should continue to promote private investment for sector expansion.

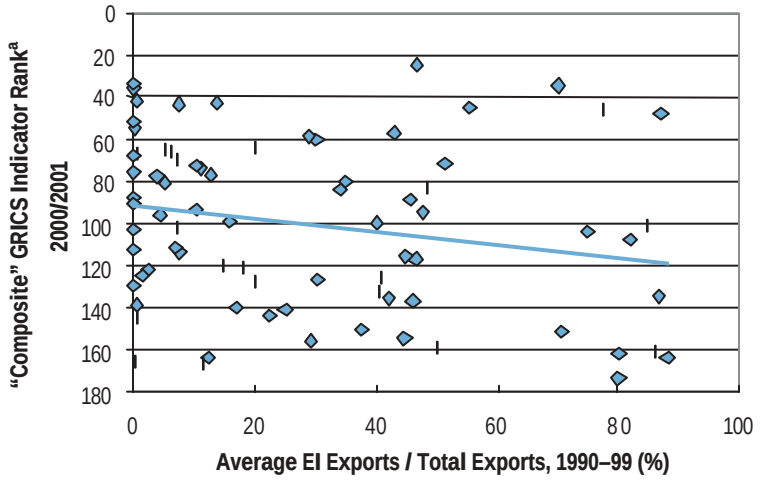
6. Addressing the Challenge of Governance

High dependence on revenues from extractive industries has been associated with corrosive effects on economic and political life, including rent-seeking and government ineffectiveness, in many countries. Indeed, a review of the literature and feedback from NGOs suggest that good governance is central to creating an environment that fosters sustainable and equitable development and is an essential complement to sound revenue management and safeguard policies. Figure C11 shows the association between the quality of governance and EI dependence.[134]

Countries such as Botswana and Chile[135] have successfully leveraged their wealth into sustainable growth through investment-friendly policies, fiscal discipline, and long-term planning. While the highest quality of overall and sectoral governance may not be required for an EI project to be beneficial to a client country, some minimum conditions should exist to help ensure that the benefits of EI projects are not squandered and the citizens left with costs that can include environmental damage, health risks, and war.

Governance, defined as how power is exercised in the management of a country's economic and social resources for development, has been an explicit concern for the World Bank at least since 1990, when the Bank's General Counsel articulated the legal basis for its work in this area. This was followed by a Board Paper on "Governance and Development"[136] that outlined the Bank's general approach to improving governance. Before this time, the Bank had undertaken many initiatives that addressed institutional and policy aspects related to governance. They included projects to reform public sector policies and institutions and to create an enabling environment for private sector development. Since the early 1990s, much effort has been devoted to strengthening complementary process-oriented aspects of governance, including public par-

Figure C11 Worse Country Governance with Greater EI-Dependence



[a] "Composite" GRICS ranks are a simple average of individual GRICS rankings for 2000/2001 for Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption.

Source: http://www.worldbank.org/sbi/governance/pdf/2001 kkzcharts.xls

ticipation, information disclosure, transparency promotion, and corruption reduction.

Project Components Relating to Governance and Transparency

The Portfolio Review found that about 41 percent of extractive industry projects had at least one component that bears directly or indirectly on improving governance and transparency. The relevant project components address sectoral governance issues such as (i) the institutional and policy framework and related capacity-building for clarification of property rights and improved accounting and auditing standards and practices and (ii) strengthening governance processes, including public consultation and participation, information disclosure and dissemination, transparency promotion, and corruption reduction.

Institutional and Policy Framework: Property rights issues relating mainly to clarification and administration of exploration rights and access to pipelines were addressed in nine completed and five active projects and had generally satisfactory outcomes. Cadastre and registry systems were formulated or upgraded (Argentina, Ecuador, Peru), and institutional capacity was improved for enforcement of laws and regulations, as well as for administering mine titles (Albania, Bolivia, Guinea, Peru, Russia, Zambia). Ongoing efforts among active projects included strengthening mining cadastral systems and related institutional capacity (Madagascar, Mozambique, Romania). In addition, components addressing the management of fiscal revenues were included in 10 projects (see Chapter 5).

Public Consultation and Participation: Consultative and participative decisionmaking processes involving all important stakeholders—local community, government, and industry—recently have emerged as important in a strategy to strengthen governance processes. In the portfolio of completed projects, public consultations of varying levels and in different forms, beyond the minimum requirements of the Bank's EA policy, were undertaken in only four projects. The Bolivia-Brazil Gas Pipeline project involved creating community-based organizations and committees and consulting the public on draft regulations and the project's environmental assessment. The Georgia Oil Insti-

tution Building project provided for training in stakeholder analysis and public consultation to maximize public participation in environmental decisionmaking. During the India Jharia Mine Fire Control project, effective public consultation processes included concerned state government, union leaders, tribal communities, and NGOs. The Russia Coal Implementation TA project supported stakeholders' participatory activities, especially local trade unions and the Association of Mining Cities.

Among the active projects, the Chad-Cameroon Pipeline project has involved public consultations in the preparation of the project's Environmental Assessment and Environmental Management Plan. Extensive and frequent public consultation also has taken place on the subject of likely project impacts and compensation measures. Compensation rates for all crops, trees, and other assets have been well researched and discussed with affected people in all categories of land tenure. The private sponsors will pay compensation at real market values, which are over and above government schedules.

Overall, while public consultation and participation has helped project implementation where it was carried out, it was quite rare across the portfolio of EI projects. This is an important gap in a sector where production and rehabilitation activities directly affect the livelihood and environmental and social well-being of large numbers of people and where benefits need to be shared in a cooperative and transparent manner to prevent rent-seeking behavior. The prominent examples of public consultation have occurred in countries with relatively higher levels of education and per capita incomes. In light of this finding, it is important to develop suitable mechanisms to ensure that affected people who are less literate and economically weak are given appropriate and fair means to register their feedback on issues that effect them. The provisions established for the Chad-Cameroon projects represent a particularly important pilot experience in this area.

Disclosure and Information Dissemination: Public disclosure and information dissemination, including conducting opinion surveys, figured in only six completed projects. Opinion surveys of project beneficiaries were conducted in six projects in Albania, Peru, Poland, and Ukraine. Public information and communications campaigns were mounted in six completed projects in Albania, Bolivia, Peru, Poland, and Zambia, with mixed results. Among active projects, the four projects associated with the Chad-Cameroon pipeline contain exemplary provisions for public disclosure and information dissemination.[137]

In Albania, as part of the Structural Adjustment Credit project (in which mining was only one component), the government conducted a survey of citizens' satisfaction with services, governance, and institutional reform strategy and received generally favorable feedback. A survey of beneficiaries and stakeholders was made under Poland's Coal SECAL I and II projects, while Poland's government also initiated an intensive dialogue with representatives of local government, labor unions, and NGOs. In the Ukraine Coal Pilot and Coal SECAL projects, an independent institute was involved in monitoring social rehabilitation efforts with affected parties and obtained generally positive feedback from project beneficiaries. A public opinion survey was conducted following the Privatization Adjustment project in Peru.

A public information campaign was mounted in Poland's Hard Coal SECAL I, and Albania began a program to survey citizen's satisfaction with key public services and publicized reviews of the impact of each element of its governance and institutional reform strategy (Albania Structural Adjustment Credit project). Following a controversy over its mapping work, the Ecuador Mining/Environment TA project began a dissemination effort to present scientific facts through various public forums. Bolivia's public information campaign on the benefits of the reform was not sufficient or effective enough to answer public criticism of the Regulatory Reform and Capitalization projects regarding benefits of newly capitalized firms. Zambia's efforts to produce an NGO policy paper proved insufficient to bridge the gap between the complex groups of NGOs and the government. Ukraine failed to respond adequately with appropriate

information or disclosure to damaging reports in the media on the conduct of coal sector reform and may have invited political opposition to the reform process.

Promoting Transparency and Reducing Corruption: Promoting transparency and reducing corruption did not figure as explicit objectives in any of the completed projects that were reviewed, with the exception of the Russia Coal SECAL I and II projects. However, some technical assistance components, such as those relating to accounting standards, bidding processes, and better management practices, had the effect of improving transparency, some of which may have lasting effects. There was one instance of misuse of project funds that was addressed eventually. Overall, 16 projects had components related to transparency or corruption, some of which were minor in scope.

An important objective of Russia's Coal SECAL I and II projects was the establishment of a transparent mechanism for the allocation and effective monitoring of subsidies. During these projects, the government of Russia took a series of radical and far-reaching steps that enhanced transparency and accountability through transfer of subsidy administration to government ministries and created mechanisms for direct payment of entitlements to individuals and job creation programs to local administrations.

The Bank's funding for Peru's Committee for Promotion of Private Investment helped it function with greater independence during the sale of state-owned enterprises (Peru's Privatization Adjustment project). Open and transparent bidding was used for the first time for petroleum imports, which helped to reduce costs of petroleum purchases (Petroleum Sector Reform project). Transparency was improved through upgrading accounting and auditing procedures during Azerbaijan's Petroleum TA and Thailand's Gas Transmission project, as well as under Madagascar's Petroleum Sector Reform project.

A notable achievement of the Peru Energy/Mining TA was that the government and public have accepted the concept of autonomous regulatory operators with stable and nondiscriminatory rules. The funds for the Miners' Separation Package scheme under Poland's Hard Coal SECAL were properly accounted for through audits, and accountability of mining companies was improved through more transparent company business plans and operating plans.

In the Ukraine Coal SECAL, the small business component saw some fraud in applications for micro-credit and employment subsidies, but follow-up measures to prevent recurrence were effective. Some administrative problems were encountered during audits of the employment restructuring funds and mine liquidation funds in Poland's Coal SECAL I and were satisfactorily resolved, and it was confirmed that the funds had been used properly.

There were some less successful experiences, as in Zambia's Second Economic and Social Adjustment project, where bilateral donors suspended program lending because of their concerns about governance issues. The Bank's sector policy initiatives in Russia helped underline the importance of institutional regulations surrounding transparent allocation of quotas and access to export pipeline facilities (Oil Sector Rehabilitation I and II projects), though a draft law for this purpose fell short of expectations. Albania's Anti-Corruption Plan supported an array of measures to increase transparency, such as deregulation, more transparent privatization and licensing procedures, public administration reform, and judicial reform, which had an impact on all sectors, including hydrocarbon and mining.

In Bolivia's Regulatory Reform and Capitalization Assistance projects, detailed asset valuation helped set a benchmark to ensure that a fair bidding process and the privatization process were considered most transparent by investors. However, the government's scheme for sharing the proceeds of capitalization with specified sections of the population was marred by cases of fraud by claimants who falsified their ages to claim benefits. During the Guinea Mining Sector Investment project, the Ministry of Mines negotiated mining rights with potential private investors in a nontransparent way with respect to bauxite and alumina concessions, especially for the Dian Dian deposits. Though outside the scope of the project, these actions could well

have affected the interest of potential investors in project activities. However, on another count, budgetary transparency was improved by the elimination of the Agency for the Management of Mines Infrastructure. Under the Mongolia Coal project, modern financial accounting, budgeting, and cost accounting have been introduced and adopted.

Overall, the scope of the project components relating to governance and transparency tended to be narrow, relating to specific steps in the sequence of project-related activities. In most cases, the link with better governance and transparency was incidental and did not follow from a stated objective of the project. None of the projects have any stated objectives dealing with larger governance or transparency issues, though these issues are recognized in many CASs. One reason for this could be the political sensitivity of this subject, making it difficult to convince client countries to adopt specific objectives in this regard. Another possibility is that these issues, being common to many sectors, may need to be dealt with at the macro level rather than through sectoral interventions.

Addressing Governance at the Country Level

Since major governance issues are most likely to be addressed through interventions that are not tied directly to EI projects, the Governance Study was undertaken to review the World Bank's assistance to six EI-dependent countries[138]—Chile, Ecuador, Ghana, Kazakhstan, Papua New Guinea, and Tanzania—in light of macro and sectoral governance problems. The study sought to understand the degree to which the Bank is factoring governance into its sectoral approach through governance-focused ESW, a governance-informed sectoral assistance strategy, and the design of projects. The study also makes an important distinction between macro and sectoral governance.

Macro Governance: Governance at the macro level covers all aspects of exercising authority through formal and informal institutions in managing a state's resources for sustainable development. Thus, the elements of macro governance include the creation of a favorable climate for economic growth, transparent budgetary and financial management, transparency in the political process, and a voice for all citizens, while providing them with effective social and environmental services. Many indicators have been developed for measuring the quality of macro governance in terms of its performance and process. Each indicator tends to cover one or two aspects of macro governance and the viewpoint of one or more important stakeholders—the government, civil society, or the business community. The World Bank Institute's Governance Research Indicators Country Snapshot (GRICS) estimates six dimensions—voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption.[139]

Sectoral Governance: In contrast to macro governance, sectoral governance in the context of the EI sector is more closely concerned with a satisfactory legal, regulatory, and institutional framework to manage environmental and social risks; involving and protecting local communities against negative impacts of EI activities, including abuse of individual rights;[140] ensuring investor compliance with the law; and protecting investor contractual rights. This requires that appropriate environmental, financial, and compensation regulations exist and are enforced, with the effective participation of the local communities, while the rights of investors are respected. The structure and process of good sectoral governance can be ensured through government capacity-building and appropriate policy, legal, and institutional reforms, preferably in the overall context of good macro governance. In the absence of indicators specific to sectoral governance, they may need to be derived from those for macro governance, but extra efforts may be needed to tailor them to the specific situations and for data collection.

From Governance Awareness to Project Design

The Governance Study found that most of the Bank's EI projects are not the result of a governance-informed sector strategy. There is no indication that the decision to support increased investment or structural adjustment loans was

preceded by an analysis that considered the likely governance benefits and risks of such investments. It is recognized that most of the EI projects under review predate the Bank's sharpened focus on governance in the later 1990s.[141] The Bank's apparent lack of integration of governance concerns into the lending program is reflected in recent OED CAEs covering the 1990s that found fault with the Bank for a belated, indirect, or muffled response to obvious governance issues in Ecuador, Ghana, Kazakhstan, and Papua New Guinea.

PNG presents a rare case where a link can be discerned between governance ESW, a governance-informed strategic approach to the EI sectors set out in the CAS, and the design of EI projects in the period under review. Both of PNG's Petroleum TA projects predated the Bank's increased focus on governance. But despite the success of these projects in building Papua New Guinea's petroleum sector, OED's CAE found that "progress in managing the growth of the oil and gas industry has not led to sustained economic benefits to the country because of macroeconomic mismanagement of oil revenues" and recommended that "the Bank should intensify its non-lending assistance, but restrain its lending services." Although both later operations, the 2000 Mining Sector Institutional TA Project and the 2000 Gas Development TA project, are primarily intended to increase private investment in their respective sectors, they also include components to address macro and sectoral governance issues.[142] The Governance Study, however, found no indication that the Bank considered the likely benefits of such increased investment in light of governance risks.

In Kazakhstan, while a public sector reform loan achieved the technocratic reforms it sought, it did not achieve its stated purpose of improving the effectiveness of resource mobilization and the efficiency of the use of resources because of the absence of system-wide checks and balances.[143] Papua New Guinea and Kazakhstan are not isolated cases.

The findings of the Governance Study are broadly similar to those of the Stakeholders' Survey, but WBG staff involved in EI projects and countries tend to be more sanguine. The survey of participants in the EIR's Stakeholder Workshops found that, while 83 percent of respondents expressed the need for the WBG to become involved in improving governance and transparency, only 41 percent felt that the level of effort and 26 percent that the level of success had been adequate. The survey of WBG staff found that 90 percent of respondents felt that improving governance and transparency in EI-dependent countries was important, and 64 percent said that these issues had been adequately addressed in projects. Here again, the survey findings confirm that there is room for significant improvement in strengthening the linkage between EI activities and governance issues.

Sequencing EI Lending with Regard to Improved Macro and Sectoral Governance

In pursuing lending interventions in EI without paying sufficient attention to governance, the World Bank risks a situation where a country is unable to capture the benefits or control the risks. Historically, the Bank's approach to the EI sectors has promoted private investment for sector expansion as a major objective on the basis that state enterprises in the sector had not been managed to maximize productivity and were subject to corruption and political interference. The rationale was that private sector development was desirable because it would be better managed and produce more fiscal revenue, but no explicit linkage was made to the efficient use of these revenues. This focus on expanding production through PSD predates the institutional changes in the late 1990s that allowed governance to be diagnosed, analyzed, and considered, and it may predate much of the debate on the development impact of EI sectors.

The Bank has no strategy for sequencing governance interventions in the EI sectors or coordinating them with work done in other sectors. Instead, the sequence of Bank actions has been shaped by the evolution of its understanding of the issues and its mandate. As a consequence, where the Bank sought to increase investment in the EI sectors, it pursued this objective either before supporting better risk management, or simultaneously. But as the experiences in Papua New Guinea and Kaza-

khstan illustrate, working to establish the prerequisites for good development outcomes from EI investments in parallel with, or after supporting expansion of the sector, poses a major challenge and is a high-risk strategy in countries with poor macro and sectoral governance.

Finally, countries are likely to be less receptive to improving governance in revenue and safeguards after the major investments have been made and incremental revenues are flowing. Yet no awareness of such logic is evident in the portfolio under review, nor is there any indication from ESW that the World Bank considered a sequencing of its interventions to mitigate the attendant risks. The decision to focus the policy dialogue with Equatorial Guinea, Kazakhstan, and Papua New Guinea on governance issues came after private investments in resource development had made the Bank unimportant as a source of finance. In hindsight, the experience in these countries points to the need for the Bank to develop a more selective and sequenced approach that takes macro and sectoral governance issues into account and gives priority to improving management of existing sectoral revenue flows and environmental and social risk ahead of promoting new investments in expanding the EI sector. Alternatively, effective measures need to be taken to ensure that revenues from new production are used to promote development and reduce poverty.

Conclusions

While the Bank has long been aware of the importance of addressing the governance challenge for ensuring the transformation of resource rents into sustainable development, there is little evidence of sector-specific governance strategies in CASs of EI-dependent countries. The Bank's project-level interventions tend to be sporadic and narrow in scope, with few cases where a link can be discerned between these interventions and governance ESW or a governance-informed strategic approach to the EI sectors set out in the CAS. Where some links can be observed, as in Papua New Guinea and Kazakhstan, their experience suggests that governance issues take a long time to address, and working to establish good governance in parallel with, or after supporting increased investment in EI, is a high-risk strategy in countries with poor macro and sectoral governance.

The priority of supporting increased investment in the EI sectors needs to be based on an assessment of the quality of macro and sectoral governance. Where sectoral governance is poor, the Bank may focus its efforts on helping the borrower better capture the benefits and control the risks of EI projects in preparation for greater investment. Where macro governance is also weak, however, the Bank's decision to support sectoral reforms must be undertaken strategically with an understanding of their likely impact.

To assess the quality of macro and sectoral governance, the Bank needs to develop appropriate diagnostic instruments that take key indicators into account, supplemented by additional analysis. Key indicators of macro governance relate to the quality of public financial management and rule of law[144] as a measure of the government's ability to address problems through institutional reforms. At present, while there is substantial Bank ESW focused on the quality of public financial management, there is no diagnostic instrument to evaluate the rule of law or the quality of sectoral governance. Both of these gaps would need to be addressed for the Bank to be able to take macro and sectoral governance into account, at least in EI-dependent countries.

Given an assessment of the quality of macro and sectoral governance, a three-tiered approach would seem appropriate:

- For countries with sound macro and sectoral governance, the Bank should support the country as needed to attract investment to expand the sector or further improve management of resource revenue flows and environmental and social risks.
- For countries with sound macro governance and weak sectoral governance, the Bank should focus its support on strengthening sectoral governance, including management of environmental and social risks, and support significant sector expansion only in conjunction with adequate provisions to compensate for sectoral governance weaknesses.

- For countries with weak macro and sectoral governance, where the government lacks the ability to manage revenues well, increased investment designed to augment government revenues will have little benefit, and the Bank should focus its support on strengthening governance and managing of environmental and social risks.[145] The promotion of investments for significant sector expansion should be avoided, except where the Bank can adequately mitigate the risk that fiscal revenues from new investment may not be used for the country's development priorities. The Chad-Cameroon model represents an important test case for such a holistic approach.[146]

7. Recommendations

How effectively has the World Bank assisted its client countries in improving the contribution of the extractive industries to sustainable development? On the one hand, with its global mandate and experience, comprehensive country development focus, and overarching mission to fight poverty, the Bank is well positioned to help countries overcome the policy, institutional, and technical challenges to transforming resource riches into sustainable benefits, and its achievements are many. Overall, nearly 80 percent of the Bank's EI projects had at least moderately satisfactory outcomes, and the performance of this portfolio has been consistently and significantly above Bank-wide averages in terms of outcome, institutional development impact, and sustainability. The Bank's research made major contributions to broadening and deepening understanding of the disappointing performance of resource-abundant countries. It has helped set standards in the formulation and implementation of guidelines for the mitigation of environmental and social impacts. More recently, it has begun to address the challenge of governance with a variety of innovative tools.

On the other hand, the Bank can do much more to improve its performance in enhancing the EI sector's contribution to development and poverty reduction by (i) formulating and implementing integrated corporate- and country-level strategies for addressing the broader developmental issues that lie at the heart of many resource-rich countries' inability to achieve sustainable development; (ii) strengthening the implementation of the Bank's projects based on its policies for mitigating environmental and social impacts and for monitoring and reporting economic, environmental, and social results; and (iii) engaging stakeholders to develop stronger and widely accepted governance frameworks to assist the transformation of resource endowments into sustainable development.

Given the size and complexity of the World Bank Group and the diversity of issues that need to be addressed, the responsibility for following up on these recommendations is not expected to rest exclusively with the sector specialists in the Energy and Mining Sector Board and the Oil, Gas, Mining, and Chemicals Global Products Group.[147]

Recommendation 1: Formulate an Integrated Strategy

The Bank has not devoted enough attention to the developmental needs of the poorly performing resource-abundant countries, many of which experienced negative growth during the 1990s. To address this gap, the Bank Group needs to formulate and implement integrated strategies, at both the corporate and country levels, for transforming resource endowments into sustainable development. Such an integrated strategy will start with the presumption that successful EI projects—whether financed by the Bank or not—have to provide revenues to governments, mitigate negative environmental and social effects, and benefit local communities. It also will need to address governance squarely and help to ensure that EI revenues are used effectively to support development priorities. It also will require much better cooperation within the WBG and with other stakeholders.

(a) Formulate a sector strategy: The Bank, together with other members of the World Bank Group, needs to design and implement a sector strategy that closely integrates resource extraction with sustainable development through the effective management of EI revenues in support of developmental priorities and the reliable mitigation of adverse environmental and social impacts.[148] Where macro and sectoral gover-

nance are weak, the Bank's assistance should focus on strengthening macro and sectoral governance. In such cases, the Bank should carefully assess and report on the risks that EI fiscal revenues may not be used for development priorities.[149] The Bank should not support significant sector expansion unless it can adequately mitigate these risks.[150] Where macro governance is sound but sectoral governance is weak, the Bank should focus on improving sectoral governance.

(b) Address extractive industries in CASs: For all resource-rich countries, the Bank should explicitly address extractive industries in the CASs.[151] The CAS should discuss the sector's economy-wide linkages (such as the importance of government revenues, their management, and distribution) and reference the underlying governance assessment. This assessment should guide future project design, facilitate monitoring and evaluation, and provide a framework for WBG-wide coordination and collaboration in the EI sector.

(c) Promote improved governance where governance is weak: The Bank should compensate for the lower level of lending that may be appropriate for resource-rich countries with weak macro and sectoral governance[152] by devoting greater management attention and an administrative budget for advisory and analytical activities aimed at improving the policy, institutional, and governance framework for EI. This would enable the Bank to establish and maintain continuity of engagement and facilitate a quick response to opportunities for assistance when they arise.[153]

(d) Support private sector development and environmental sustainability: In all countries, the Bank should be ready to support the closure of uneconomical mines, reform and privatization of state-owned enterprises, and mitigation of preexisting environmental and social problems. Where appropriate, the Bank should help integrate ASM with the formal sector and internalize its environmental and social impacts, while at the same time creating alternative employment opportunities and supporting the consolidation of ASM activities for greater efficiencies and economies of scale.

Recommendation 2: Strengthen Project Implementation

The Bank needs to strengthen the implementation of its existing policy framework and ensure that it remains up-to-date with evolving needs. Given the potential impacts of resource extraction and the controversy surrounding the sector, rigorous implementation of safeguard policies is a minimum requirement for the Bank to operate in a world concerned with sustainable development. In addition, in light of growing concerns about the sustainability of EI-based development, the Bank needs to define, monitor, document, and report on the economic, social, and environmental impacts of its projects more systematically. Specifically, the sharing of benefits, identified by many stakeholders as a very important issue for resource extraction, needs to be explicitly monitored and evaluated.

(a) Improve upstream project screening: The Bank should provide clearer and more consistent guidance for the categorization of sectoral adjustment and technical assistance projects, the identification of applicable safeguards at the initial project screening, the appropriate scope and nature of the EA instruments, and the reporting and evaluation of safeguards implementation. This needs to be followed up through the entire implementation framework, from good practice guidelines to appropriate monitoring and training.

(b) Provide for adequate specialist involvement at every stage: The Bank should strengthen the implementation of its safeguard policies by providing adequate resources for the participation of qualified environmental and social specialists in the preparation, appraisal, and supervision of all projects that are likely to have adverse impacts. This will ensure that such impacts are addressed adequately through the upstream design of appropriate mitigation strategies or project alternatives, as well as through the retrofit of timely remediation measures should unexpected impacts materialize during project implementation.

(c) Enhance reporting of results: The Bank should strengthen the implementation of its completion reporting requirements by (i) ensuring that project completion reports include the

calculation of an ex-post economic rate of return or net present value or, where that is not feasible, a cost-effectiveness analysis to determine whether the project represented the least-cost solution to attain its objectives and (ii) preparing an activity completion summary for every significant nonlending activity.

(d) Evaluate the sharing of benefits: At appraisal and project completion, the Bank should systematically estimate the distribution of project benefits among different stakeholder groups—government at different levels, private companies, and local communities—evaluate its sensitivity to different scenarios and discuss its acceptability with key stakeholder groups.

Recommendation 3: Engage the Stakeholders

Often in collaboration with other organizations, the Bank has brought together diverse stakeholders in extractive industries to address issues at the local, national, regional, and global levels. The Bank's convening role has been actively sought and has been significant because of its access to all stakeholders, private and public development experience, and ongoing involvement with project investment and technical assistance in the sector. But the Bank has addressed some areas inadequately—notably governance and revenue management. The Bank's performance in these areas can be enhanced by improving consultation with stakeholders, including local communities, and by systematically and transparently reporting on key sustainability indicators. Such an approach also is likely to raise standards and practices of the sector as a whole.

(a) Update policy framework: In consultation with its stakeholders, the Bank should adjust its policy framework for extractive industries periodically to ensure that they remain up-to-date with evolving industry practice. It should resolve remaining inconsistencies within the WBG[154] and address identified gaps.[155] It also should recognize the expanding awareness of the human rights dimension of Bank policies and projects and explore possible avenues for addressing the issues, especially where it lags industry best practice.

(b) Promote disclosure of fiscal revenues from EI: The Bank should vigorously pursue country- and industrywide disclosure of government revenues from EI and related contractual arrangements (such as production-sharing agreements, concession, and privatization terms).[156] It should work toward and support disclosure of EI revenues and their use in resource-rich countries.

(c) Define and monitor sustainability indicators: Together with other stakeholders, the Bank should define indicators of economic, social, and environmental sustainability,[157] establish baseline data, provide for adequate monitoring over the life of the project, and report and evaluate on the results during supervision and in project completion reports. The Bank also should encourage more independent outside monitoring, ideally using local capacity (which may have to be developed).

(d) Increase local community participation: The Bank should support enhanced community consultation and participation throughout the life cycle of EI-projects. The Bank should assist countries to increase involvement by local communities in EI decisionmaking processes and ongoing consultation throughout the project life cycle, including closure.

Attachment 1 Portfolio of Extractive Industries Projects: FY93–FY02

Total Number of Projects: 76
Oil and Gas (Completed 24; Active 15); Mining (Completed 24; Active 13)

Oil and Gas: Completed Projects

Project Title	Region	Country	Lending Instrument	FY Approval	FY Completed	EA Category	Project Cost	WB Loan
Petroleum Technical Assistance II	AFR	Equatorial Guinea	Technical Assistance	1993	1998	C	3	3
Calub Energy Development	AFR	Ethiopia	Specific Investment	1994	2001	A	14	14
Petroleum Sector Reform	AFR	Madagascar	Sector Investment and Maintenance Loan	1993	1999	B	6	5
Petroleum Sector Rehabilitation	AFR	Tanzania	Specific Investment	1991	2001	B	0	0
Petroleum Rehabilitation	AFR	Zambia	Specific Investment	1994	2000	B	19	4
Petroleum Exploration & Development Technical Assistance	EAP	Papua New Guinea	Technical Assistance	1994	2001	C	13	11
Petroleum Distribution & Sector Management	EAP	Republic of Korea	Specific Investment	1993	1999	A	653	112
Bongkot Gas Transmission	EAP	Thailand	Specific Investment	1993	1996	A	334	92
Second Gas Transmission	EAP	Thailand	Specific Investment	1995	1998	A	482	111
Clean Fuels and Environment Improvement	EAP	Thailand	Specific Investment	1995	2000	A	41	38
Petroleum Technical Assistance	ECA	Azerbaijan	Technical Assistance	1995	2001	C	10	20
Natural Gas System Reconstruction	ECA	Bosnia-Herzegovina	Emergency Rehab.	1997	2000	B	44	10
Oil Institution Building Technical Assistance	ECA	Georgia	Technical Assistance	1997	2001	C	1	1
Petroleum Technical Assistance	ECA	Kazakhstan	Specific Investment	1994	2000	C	14	13
GHG Reduction in Natural Gas (GEF)	ECA	Russian Federation	Global Environment Facility	1996	1999	C	1	1
Oil Rehabilitation Project	ECA	Russian Federation	Specific Investment	1993	2000	A	1035	414
Second Oil Rehabilitation Project	ECA	Russian Federation	Specific Investment	1994	2000	A	678	346
Third Structural Adjustment Loan	ECA	Russian Federation	Structural Adjustment	1999	2001	U	1500	1500
Oil Pipeline Engineering Project	ECA	Turkey	Technical Assistance	1997	1999	C	3	3
Hydrocarbon Sector Reform & Capitalization Technical Assistance	LAC	Bolivia	Technical Assistance	1996	1999	B	9	11
Gas Sector Development Project	LAC	Brazil	Specific Investment	1997	2001	A	1594	130
Energy Technical Assistance	LAC	Colombia	Technical Assistance	1995	2002	B	12	11
Energy and Mining Technical Assistance	LAC	Peru	Technical Assistance	1993	1999	B	16	11
Gas Infrastructure Development	SAS	Bangladesh	Specific Investment	1995	2000	A	135	68

Oil and Gas: Active Projects

Project Title	Region	Country	Lending Instrument	FY Approval	EA Category	Project Cost	WB Loan
Oil Spill Contingency	AFR	Africa	Global Environment Facility	1999	C	5	3
Petroleum Environment Capacity Enhancement Project	AFR	Cameroon	Technical Assistance	2000	C	11	6
Chad/Cameroon Pipeline	AFR	Cameroon	Specific Investment	2000	A	3500	90
Chad Petroleum Power Engineering	AFR	Chad	Specific Investment	1991	C	14	22
Petroleum Development & Pipeline Project	AFR	Chad	Specific Investment	2000	A	3724	93
Petroleum Sector Capacity-Building	AFR	Chad	Specific Investment	2000	C	26	24
Management of the Petroleum Economy Project	AFR	Chad	Specific Investment	1999	C	19	18
Gas Engineering	AFR	Mozambique	Specific Investment	1994	B	49	30
Songo Songo Gas Development and Power Generation Project	AFR	Tanzania	Specific Investment	2001	A	313	183
GEF Sichuan Gas Development & Conservation	EAP	China	Specific Investment	1994	A	945	265
Gas Development Technical Assistance	EAP	Papua New Guinea	Technical Assistance	2000	C	8	7
Energy Transit Institutional Building	ECA	Georgia	Technical Assistance	2001	C	12	10
Uzen Oil Field Rehabilitation	ECA	Kazakhstan	Specific Investment	1997	A	136	109
Petroleum Sector Rehabilitation	ECA	Romania	Specific Investment	1994	B	346	176
Emergency Oil Spill Mitigation	ECA	Russian Federation	Emergency Rehabilitation	1995	C	140	99

Mining: Completed Projects

Project Title	Region	Country	Lending Instrument	FY Approval	FY Completed	EA Category	Project Cost	WB Loan
Mining Sector Development & Environment	AFR	Ghana	Specific Investment	1995	2002	B	13	9
Mining Sector Investment Promotion	AFR	Guinea	Technical Assistance	1996	2001	C	16.8	23
Mining Sector Development	AFR	Tanzania	Technical Assistance	1995	2002	B	13	12
Second Economic and Social Adjustment Credit	AFR	Zambia	Structural Adjustment	1996	1998	U	90	90
Econ. Recovery and Inv. Promotion Credit	AFR	Zambia	Sectoral Adjustment	1996	1998	C	140	140
Public Sector Reform and Export Promotion Credit Project	AFR	Zambia	Structural Adjustment	1999	2001	U	170	170
Economic Transition Support	EAP	Mongolia	Rehabilitation Investment	1994	1997	U	26	23
Mongolia Coal Project	EAP	Mongolia	Specific Investment	1996	2002	B	61.9	0
Structural Adjustment Credit	ECA	Albania	Structural Adjustment	1999	2001	U	45	45
Hard Coal Sectoral Adjustment	ECA	Poland	Sectoral Adjustment	1999	2001	B	300	300
Hard Coal Sectoral Adjustment II	ECA	Poland	Sectoral Adjustment	2002	2002	B	100	100
Coal Sectoral Adjustment	ECA	Russian Federation	Sectoral Adjustment	1996	1997	B	500	500
Coal Sector Restructuring Implementation Assistance Project	ECA	Russian Federation	Technical Assistance	1996	2003	C	31	17
Coal Sectoral Adjustment II	ECA	Russian Federation	Sectoral Adjustment	1998	2002	B	800	800
Priv. Impl. Assistance & Social Safety Net	ECA	Turkey	Technical Assistance	1994	2000	C	129	30
Coal Pilot	ECA	Ukraine	Specific Investment	1996	2001	B	28	13
Coal Sectoral Adjustment	ECA	Ukraine	Sectoral Adjustment	1996	2000	B	300	300
Capitalization Program Adjustment Credit	LAC	Bolivia	Sectoral Adjustment	1996	1999	B	147	65
Reg. Reform and Cap. TA	LAC	Bolivia	Specific Investment	1994	1999	C	30	15
Env Conservation and Rehabilitation	LAC	Brazil	Specific Investment	1996	2000	B	87	36
Mining Dev and Env Control TA	LAC	Ecuador	Technical Assistance	1994	2001	A	24	11
Privatization Adjustment Loan	LAC	Peru	Sectoral Adjustment	1993	1998	C	280	280
Coal Sector Rehab	SAS	India	Specific Investment	1998	2001	A	1697	263
Jharia Mine Fire Control TA	SAS	India	Technical Assistance	1993	1999	B	11	8

Mining: Active Projects

Project Title	Region	Country	Lending Instrument	FY Approval	EA Category	Project Cost	WB Loan
Mining Capacity-Building	AFR	Burkina Faso	Specific Investment	1997	C	22	21
Mining Sector Reform Project	AFR	Madagascar	Learning and Innovation Loan	1998	C	22	21
Mining Sector Capacity	AFR	Mauritania	Technical Assistance	1999	C	16	15
Mineral Resources Project	AFR	Mozambique	Technical Assistance	2001	C	33	18
Economic Recovery and Investment Promotion TA	AFR	Zambia	Technical Assistance	1996	C	27	23
Mine Township Services Project	AFR	Zambia	Specific Investment	2000	B	38	38
Mining Sector Institutional Strengthening TA	EAP	Papua New Guinea	Technical Assistance	2000	B	12	10
Mine Closure	ECA	Romania	Specific Investment	2000	B	62	44
Privatization Social Support	ECA	Turkey	Specific Investment	2001	C	355	250
Mining Sector Development	LAC	Argentina	Technical Assistance	1996	B	40	30
Mining Technical Assistance	LAC	Argentina	Technical Assistance	1998	B	46	40
Energy & Mining TA Loan	MNA	Algeria	Technical Assistance	2001	C	22	18
Coal Environment & Social Mitigation	SAS	India	Specific Investment	1996	C	84	63

Attachment 2 Extractive Industries–Dependent Countries

Country	Oil and Gas: Average Oil and Gas Share of Total Exports[1] 1990–99 (%)	Population 2002[2] (millions)	Population below Poverty Line[3] (%)	Gross National Income Capita[2] (US$: 1999)	Average GDP/Capita Growth,[2] 1990–99 (%)
Yemen	89.0	17.5	19	390	1.46
Congo, Rep.	88.1	50.9	..	560	–3.27
Nigeria	86.8	126.9	34	250	0.2
Oman	86.4	10.8	..	n/a	0.95
Angola / Cabinda	83.5	1.6	..	410	–2.03
Iran	82.0	63.7	..	1,600	3.01
Turkmenistan	74.5	5.2	..	640	–7.11
Gabon	73.8	1.2	..	3,300	–0.07
Venezuela	56.9	24.2	31	3,730	0.16
Syria	48.9	16.2	..	930	3.19
Cameroon	33.5	14.9	40	600	–2.11
Ecuador	30.4	12.6	35	1,330	–0.27
Algeria	28.7	30.4	23	1,540	–0.49
Kazakhstan	23.1	14.9	35	1,290	–4.36
Papua New Guinea	20.0	4.8	..	770	2.26
Trinidad / Tobago	16.3	1.3	..	4,660	2.01
Russian Federation	16.2	145.6	31	1,750	–4.9
Azerbaijan	15.8	8.0	68	570	–2.18
Vietnam	15.8	78.5	51	370	5.51
Colombia	14.7	42.3	18	2,150	0.92

Note: ".." = not available.

Sources: World Bank and International Finance Corporation (2002)[1]; World Development Indicators, Central Database, World Bank[2]; World Development Indicators, World Development Report 2003.[3]

	Mining				
Country	Average Mining Share of Total Exports[1] 1990–99 (%)	Population 2002[2] (millions)	Population below Poverty Line[3] (%)	Gross National Income Capita[2] (US$: 1999)	Average GDP/Capita Growth,[2] 1990–99 (%)
Guinea	84.7	7.4	40	490	1.42
Congo (Dem. Rep.)	80.0	51.4	..	100	–6
Zambia	74.8	10.1	86	320	–2.3
Niger	70.6	10.8	63	190	–1.5
Botswana	70.0	1.6	..	3,040	2.53
Namibia	55.4	1.7	..	2,100	1.6
Jamaica	51.3	2.6	19	2,400	–0.13
Sierra Leone	50.0	5.0	68	130	–6.31
Suriname	48.3	0.4	..	1,350	2.71
Chile	46.6	15.2	21	4,600	4.86
Mauritania	46.0	2.7	57	390	0.55
Papua New Guinea	44.8	4.8	..	770	2.11
Peru	43.7	25.7	49	2,130	1.5
Mongolia	43.0	2.4	36	390	–1.64
Central Afr. Republic	42.1	3.6	..	290	–0.82
Ukraine	40.0	49.6	32	770	–8.63
Mali	40.0	10.8	..	240	0.69
Togo	37.7	4.7	32	310	–1.27
Bolivia	35.6	8.3	..	990	1.63
Guyana	35.0	0.9	..	760	4
Ghana	34.0	19.2	31	400	1.55
South Africa	30.0	42.8	..	3,160	–0.67
Jordan	28.9	4.9	12	1,630	0.4
Kazakhstan	23.2	14.9	35	1,290	–4.36
Kyrgyz Republic	21.2	4.9	51	300	–4.58
Morocco	20.0	28.7	19	1,190	0.73
Armenia	20.0	3.8	..	490	–2.6
Uzbekistan	18.4	24.7	..	640	–2.46
Cuba	17.8	11.2	..	500	5.6
Tanzania	15.8	33.7	42	260	0.36

Note: ".." = not available.

Sources: World Bank and International Finance Corporation (2002)[1]; World Development Indicators, Central Database, World Bank[2]; World Development Indicators, World Development Report 2003.[3]

Attachment 3 OED Evaluation Guidelines

OED's guidelines for evaluating the outcome, sustainability, and institutional development impact (IDI) of projects are summarized below:

Outcome

Definition: *The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently.*

The outcome criterion is assessed on a six-point scale—highly satisfactory, satisfactory, moderately satisfactory, moderately unsatisfactory, unsatisfactory, and highly unsatisfactory. These differentiations reflect the large amount of information contained in the assessments of the three criteria supporting the outcome assessment (relevance, efficacy, and efficiency). The guiding principles provided below cover a high proportion of likely project evaluation scenarios.

Ratings

Highly Satisfactory: Project achieved or exceeded, or is expected to achieve or exceed, all its major relevant objectives efficiently without major shortcomings.

Satisfactory: Project achieved, or is expected to achieve, most of its major relevant objectives efficiently with only minor shortcomings.

Moderately Satisfactory: Project achieved, or is expected to achieve, most of its major relevant objectives efficiently but with either significant shortcomings or modest overall relevance.

Moderately Unsatisfactory: Project is expected to achieve its major relevant objectives with major shortcomings or is expected to achieve only some of its major relevant objectives, but it is expected to achieve positive efficiency.

Unsatisfactory: Project has failed to achieve, and is not expected to achieve, most of its major relevant objectives with only minor development benefits.

Highly Unsatisfactory: Project has failed to achieve, and is not expected to achieve, any of its major relevant objectives with no worthwhile development benefits.

Institutional Development Impact

Definition: *The extent to which a project improves the ability of a country or region to make more efficient, equitable, and sustainable use of its human, financial, and natural resources through (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. IDI includes both intended and unintended effects of a project.*

Development can be defined as a process of institutional transformation through which scarce resources are used to enhance human welfare over the long term. This transformation involves changes in values, customs, laws and regulations, and formal and informal rules, as well as periodic realignments of organizational mandates, objectives, competencies, and resources. A development intervention has a positive institutional development impact if it effects such a transformation and thereby enhances the ability of a country or region to make more efficient, equitable, and sustainable use of the human, financial, and natural resources at its disposal. Accountability, good governance, the rule of law, and the participation of civil society and the private sector are prominent characteristics of an effective institutional environment.

Ratings

High: Project as a whole made, or is expected to make, a critical contribution to the country's/region's ability to use human, financial,

and natural resources effectively, either through the achievement of the project's stated institutional development (ID) objectives or through unintended effects.

Substantial: Project as a whole made, or is expected to make, a significant contribution to the country's/region's ability to use human, financial, and natural resources effectively, either through the achievement of the project's stated ID objectives or through unintended effects.

Modest: Project as a whole increased, or is expected to increase, to a limited extent the country's/region's ability to use human, financial, and natural resources effectively, either through the achievement of the project's stated ID objectives or through unintended effects.

Negligible: Project as a whole made, or is expected to make, little or no contribution to the country's/region's ability to use human, financial, and natural resources effectively, either through the achievement of the project's stated ID objectives or through unintended effects.

Sustainability

Definition: *The resilience to risk of net benefits flows over time.*

Sustainability is evaluated by assessing the risks and uncertainties faced by a project and by ascertaining whether adequate arrangements are in place to help avoid known operational risks or mitigate their impact. The rating helps to identify projects that require close attention by the borrower, the Bank, and other partners in managing risks that may affect the flow of net benefits. Sustainability says nothing about the absolute level of the net benefits in relation to economic justification thresholds. It focuses on the features that contribute to the maintenance of operational achievements over the long term and the adaptability of operational designs and implementation arrangements to deal with shocks and changing circumstances.

Ratings

Highly Likely: Project net benefits flow meets most of the relevant factors determining overall resilience at the "high level," with all others rated at the "substantial" level.

Likely: Project net benefits flow meets all relevant factors determining overall resilience at the "substantial" level.

Unlikely: Project net benefits flow meets some but not all relevant factors determining overall resilience at the "substantial" level.

Highly Unlikely: Project net benefits flow meets few of the relevant factors determining overall resilience at the "substantial" level.

Not Evaluable: Insufficient information available to make a judgment.

Attachment 4 Background Papers

Thematic Studies

1. World Bank. 2002. *Evaluation of the World Bank Group's Activities in the Extractive Industries: Review of the Portfolio of World Bank Extractive Industries Projects.* OED Background Paper, World Bank.

2. Luis A. Ramirez. 2002. *Review of the World Bank's Assistance on Revenue Management Issues in Resource Abundant Countries.* OED Background Paper, World Bank.

3. Melissa A. Thomas. 2003. *Factoring in Governance: The World Bank and Extractive Industry Projects.* OED Background Paper, World Bank.

4. Roger J. Batstone. 2003. Review of Implementation of Safeguard Policies of World Bank Extractive Industries Projects. OED Background Paper, World Bank.

Country Case Studies

1. World Bank. 2003. *World Bank Group's Activities in the Extractive Industries: Ecuador Country Case Study.* OED Background Paper, World Bank.

2. World Bank. 2003. *World Bank Group's Activities in the Extractive Industries: Equatorial Guinea Country Case Study.* OED Background Paper, World Bank.

3. World Bank. 2003. *World Bank Group's Activities in the Extractive Industries: Ghana Country Case Study.* OED Background Paper, World Bank.

4. World Bank. 2003. *World Bank Group's Activities in the Extractive Industries: Papua New Guinea Country Case Study.* OED Background Paper, World Bank.

5. World Bank. 2003. *World Bank Group's Activities in the Extractive Industries: Kazakhstan Country Case Study.* OED Background Paper, World Bank.

Project Performance Assessment Reports

1. World Bank. 2003. *Project Performance Assessment Report: Brazil Gas Sector Development Project (L4265), Brazil Hydrocarbon Transport/Processing Project (L3376), and Brazil Natural Gas Distribution Project—Sao Paulo (L3043).* Draft Report. Operations Evaluation Department, World Bank.

2. World Bank. 2003. *Project Performance Assessment Report: Ecuador Mining Development and Environmental Control Technical Assistance Project (L3655).* Draft Report. Operations Evaluation Department, World Bank.

3. World Bank. 2003. *Project Performance Assessment Report: Equatorial Guinea Second Petroleum Technical Assistance Project (Credit 2408).* Report No. 24430. Operations Evaluation Department, World Bank.

4. World Bank. 2003. *Project Performance Assessment Report: Ghana Mining Sector Rehabilitation Project (C1921) and (L3927).* Draft Report. Operations Evaluation Department, World Bank.

5. World Bank. 2003. *Project Performance Assessment Report: Kazakhstan Petroleum Technical Assistance Project (Loan 3744).* Draft Report. Operations Evaluation Department, World Bank.

6. World Bank. 2003. *Project Performance Assessment Report: Papua New Guinea Petroleum Exploration Technical Assistance Project (Credit 1279) and Petroleum Exploration and*

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6. World Bank. 2003. *Project Performance Assessment Report: Ukraine Coal Pilot Project and Coal Sector Adjustment Loan (Credit 4016 & 4118).* Report No. 24928. Operations Evaluation Department, World Bank.

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