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SUSTAINABILITY &amp; RESOURCE PRODUCTIVITY

## Riding the resource wave: How extractive companies can succeed in the new resource era

With economic and social expectations rising in resource-rich countries, extractive companies must rethink how they do business.

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The business of extracting resources could be increasingly lucrative in the years ahead, and it is crucial to the economic prospects of many countries. But it is also likely to become riskier and more complex, requiring extractive companies in both mining and oil and gas to rethink their business models. Specifically, that means shifting from an extraction mind-set to a development one in what we call “frontier regions”—places with unstable business and legal environments. Extractive companies must systematically learn the priorities of host governments and local communities, then forge partnerships to deliver on them. Such an approach can defuse tensions before they arise and make for a less volatile operating environment.

Ever since the wave of nationalizations of oil companies in the 1970s, extractive industries have operated in a relatively secure world. Much of production came from legacy assets in economies that are members of the Organisation for Economic Co-operation and Development, where the rules of the game were established, and the focus was largely on operational improvement. This era was characterized by relatively abundant access to critical inputs such as water. Governments earned stable fiscal flows and, given the fairly low profit margins that were standard, companies attracted less external scrutiny. This environment is changing rapidly.

There are several reasons for this.

**Higher and more volatile resource prices**

Since the turn of the century, average minerals prices have roughly doubled; energy prices have tripled. This has led to a strong increase in the production of energy and minerals, by 14 percent in the case of oil and by more than 100 percent in the case of iron ore since 2000. Despite recent declines in prices for some resources, such as iron ore, commodity prices on average remain roughly where they were in 2008, when the global financial crisis began. They have also risen more sharply than global economic output since 2009.<sup>1</sup> Moreover,

the volatility of resource prices is at an all-time high, a state that we think will continue.

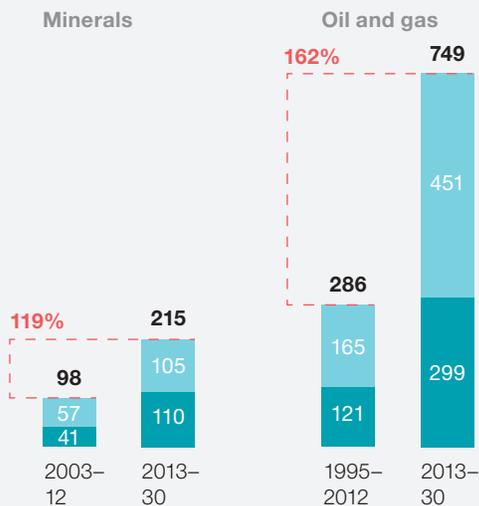
Volatility can undermine relationships between extractive companies and host governments. If prices rise sharply from where they were when contracts were signed, governments might feel they are not getting enough and want to renegotiate. Data from the Royal Institute of International Affairs in London indicate that the number of arbitration cases has risen sharply since 2000, when the run-up in oil, metals, and mineral prices began.<sup>2</sup> Between 1990 and 1999, there were five arbitrations in mining and five in oil and

**Exhibit 1**

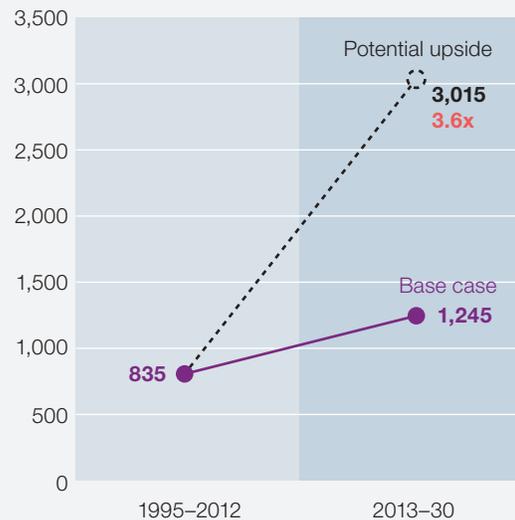
**By 2030, up to \$17 trillion will be invested in mineral and oil and gas projects in lower-income countries.**

**Annual global investment requirements, \$ billion<sup>1</sup>**

- Growth capital expenditures
- Replacement capital expenditures



**Resource investment in low- and lower-/middle-income countries,<sup>2</sup> \$ billion**



Cumulative total, 2013–30: >\$16 trillion (~\$3.6 trillion for minerals)

Resource-extraction investment in lower-income countries could triple from historical levels

<sup>1</sup>Figures may not sum, because of rounding.

<sup>2</sup>As defined by the World Bank on the basis of gross national income per capita in 2011. This represents the share of the total global cumulative investment to 2030 that could be focused on low- and lower-/middle-income countries.

Source: Economics & Country Risk; Rystad Energy; Wood Mackenzie; World Bank; McKinsey analysis

gas; from 2000 to 2009, there were 21 and 44 such cases, respectively.

#### More challenging production locations

Even if the world were able to achieve a step change in resource productivity—the efficiency with which resources are extracted and used—new sources would still be required to replace those that are running out. By 2030, we estimate that between \$11 trillion and \$17 trillion of new investment will be needed—65 to 150 percent higher than historical levels (Exhibit 1).<sup>3</sup>

Historically, almost 90 percent of resource investment has been in generally stable high- and upper-middle-income countries. In the future, the share of resource investment is likely to be in poorer and often more volatile environments. New projects in many of these frontier regions, however, are environmentally and geologically challenging. Infrastructure is often lacking, and the political dynamics can also be difficult. Almost half of new copper projects, for example, are in countries with high levels of political instability. All this translates into higher costs and greater risks.

#### Larger and more visible projects

Another challenge is that many projects are huge relative to the size of their host-country economies. Consider Rio Tinto's Simandou iron-ore project in Guinea. This is expected to produce revenue of more than 130 percent of GDP; we know of at least another five projects whose revenues will be half or more of GDP. As a result, operations are highly visible, contributing to public pressure that they be seen to help society, with regard to taxes, jobs, and other contributions. Our analysis of a selection of speeches by policy makers in several resource-driven countries shows that there has been a strong emphasis on issues such as local economic development and social and community benefits. The clear implication is that companies are expected to be not only responsible operators but also positive forces in the country in many dimensions.

#### Fiscal pressures on governments

There are 42 countries (for which there are data) where resources account for more than 20 percent of government revenue.<sup>4</sup> Many of these countries are under pressure to meet the increased expectations of their citizens while also addressing major issues, such as pensions and cost of living. This can lead to pressure to renegotiate fiscal agreements with extractive companies to increase the government's share of the wealth generated.

#### Dealing with the 'resource curse'

The number of countries where resources represent a large share of their economic output, fiscal revenues, or exports has increased by 40 percent since 1995.<sup>5</sup> However, the economic track record of many of these countries is far from impressive. Many have struggled to create long-term growth and employment. Almost 80 percent of countries whose economies historically have been driven by resources have below-average levels of per capita income, and more than half of these are not catching up. This economic underperformance, dubbed the "resource curse," can create further pressures on the extractive industry to support broader economic growth and job creation. This is a particular challenge in an industry that tends to employ relatively few people directly.

#### Pressure for greater transparency

The expectations for extractive-company behavior are higher than ever before. In the European Union, for example, new laws require companies to report payments of more than €100,000 made to the government in any country in which they operate, including taxes levied on their income, production or profits, royalties, and license fees. The United States also has stringent laws governing conduct of US companies overseas. Between them, US law and EU directives cover about 70 percent of the value of the global extractive industries. The rise of social media, the rapid diffusion of technologies such as mobile phones to low-income consumers, and the more active role of nongovern-

mental organizations mean that any extractive companies are subject to strong scrutiny.

#### Increased environmental concerns

The extractive industry is likely to face increasing pressure to pay for commodities such as carbon and water that are largely under- or unpriced. While carbon is a global concern, water constraints have a large direct impact on relationships with host communities. Pricing water could dramatically raise costs and constrain output, given that 32 percent of copper mines and 39 percent of iron-ore mines are in areas of moderate to high water scarcity. Pricing water to reflect its “shadow cost”—meaning the economic value of the water if put to its best alternative use—could increase iron-ore costs by more than 3 percent.<sup>6</sup> Companies also face having to deal with “stranded resource assets”—those that are subject to unanticipated or premature write-offs, downward revaluations, or conversion to liabilities if there is strong policy action to combat climate change or promote other goals.

Relationships between extractive companies and governments have long been fraught. In a higher-risk, higher-volatility environment, such tensions could increase and lead to a zero-sum game in which companies and governments are constantly at odds. The stakes are too high to let that happen. Therefore, it is in the interest of all parties to adapt their operating models to this new context.

Policy makers in these countries will need to adopt new approaches to ensure that their resource endowments are a blessing for their economies rather than a curse and seek to create real partnerships with extractive companies.<sup>7</sup> For their part, companies will need to rethink their operating model. Right now, the usual practice is to concentrate on extraction, with some additional attention given to corporate responsibility. We think the better long-term approach, and one that will bring a genuine

competitive edge, is for companies to put economic development at the heart of their corporate strategy.

One good example of this is the Moroccan phosphates company OCP, which decided to boost the local content in its supply chain. Based on an analysis of spending in around 80 sectors, OCP developed a portfolio of target sectors. It then considered the GDP contribution of each sector and how it might be possible to localize content. OCP supported this effort by engaging in joint ventures with international companies to ensure that Moroccan companies could gain skills and capabilities, establishing volume guarantees to minimize the risk to local suppliers, developing dedicated economic zones, and creating transparency on the demand pipeline to minimize uncertainty. A dedicated office responsible for deal making, program management, local-content auditing, and reporting and communications supported OCP’s program.

Another area of opportunity is infrastructure. We estimate that extractive companies are likely to spend on the order of \$2 trillion on infrastructure by 2030. We believe companies and governments should look closely at ways of sharing these assets. By doing so, countries can take advantage of private-sector capital and know-how while both sides benefit from building stable, long-term partnerships. Examples include building roads that allow other users to benefit or ensuring that power capacity is sufficient to provide excess power to the grid.

Companies need to develop a deep understanding of the societies where they operate and build relationships with host governments that can endure through inevitable difficulties. That means they must be willing to some extent to accept the country’s priorities as their own and to perform against these expectations. This also means that both parties need to create strong incentives to adhere to agreements throughout the lifetime of the project.

There are three major considerations.

*Developing a detailed understanding of the country context.* Extractive companies spend hundreds of millions of dollars and many years to understand the geological and technical aspects of project development. They spend much less time and money to develop an equally sophisticated view of the political, social, and economic factors that shape the countries in which they operate. This needs to change. There are ten elements that

companies need to understand before they start digging or drilling (Exhibit 2).

A few generalities are worth keeping in mind as extractive companies seek to create effective partnerships with local stakeholders. One is that the less developed a country is, the more likely its government will have high expectations that extractive companies will build infrastructure and contribute to economic and social development. Companies also need to be prepared to deal with

**Exhibit 2 Companies need to understand ten important dimensions of resource-driven countries.**

		<b>Strategic implications</b>
<b>Geographic/social</b>	Country size (population)	Diversification difficult for smaller countries; local-content settings critical
<b>Economic</b>	State of economic development	Implications for spending priorities and broader economic strategy
<b>Institutional</b>	Political stability	Stability necessary for competitive investment destinations
	Governmental stability	Crucial for direct state participation in resource sector
<b>Resource</b>	Time since first production	Maturity of sector governance
	Remaining asset life reserves/production ratio	Influences need for future exploration and diversification
	Geological attractiveness	Competitive and potential government take
	Resource rents (% of GDP)	Severity of potential "resource curse" concerns
	Number of resources	Potential to reduce country risk from being tied to a single resource
	Importance to global supply	Country bargaining power with companies

Source: BP Statistical Review of World Energy; World Bank Worldwide Governance Indicators; McKinsey analysis

weak institutions and limited government capacity. Another factor to consider is the nature of the resource in its particular context. If the country has a long history of, say, gold production, it is likely to be easier to find local suppliers, skilled personnel, and experienced regulators. The remaining life of an asset is also important. Are the resources there for hundreds of years or for a decade? A longer time horizon encourages both sides to strike long-term stable agreements.

*Measuring performance against expectations.* Most extractive companies already make substantial contributions to the countries where they work, but we believe companies need to adopt a more sophisticated approach. Specifically, they need to understand stakeholder expectations and develop a business case for such investments. This is the only way to judge whether they offer value. Drawing on a broad-based review of the available literature and interviews with a large number of experts, we have developed a set of more than 90 measures to consider. These fall into five categories: fiscal contribution, job creation and skill building, infrastructure investment, social and community benefits, and environmental preservation (Exhibit 3). Other measures assess the company's performance on managing stakeholders and communications efforts, which are important if the company's contributions are to be appreciated.

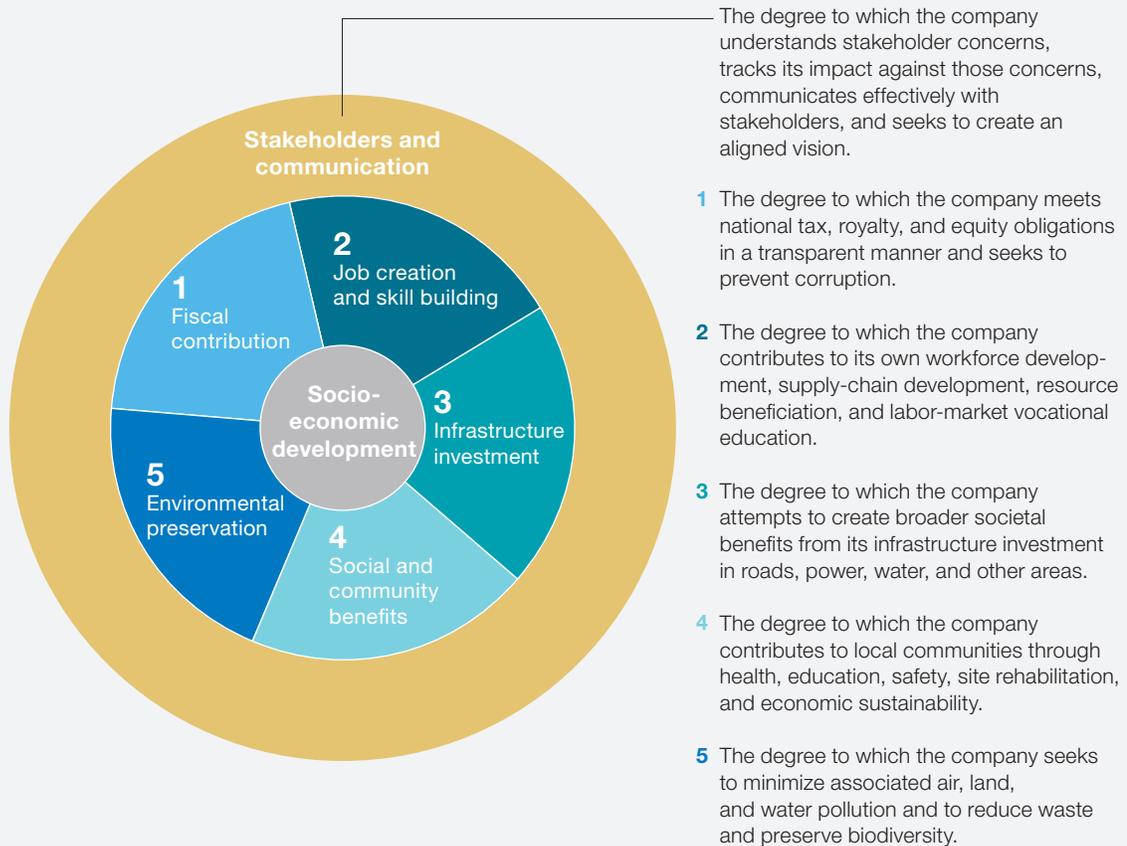
Based on our work with extractive companies, we have noticed the following things about the current operations of many extractive companies:

- The priorities of extractive companies often do not match those of local stakeholders. We found a considerable disconnect between what companies do and what governments want them to do. In one instance, a company was doing well in environmental management but far less well on infrastructure and job creation, which were higher priorities for the local government. Priorities for development decided in

corporate headquarters can be disconnected from those of local stakeholders. This dynamic is particularly ironic given that one of the main goals of development-focused activities is to foster positive relations with a host government. Specific priorities vary, but we found that local job creation consistently appeared to be valued less by companies than by local stakeholders.

- Priorities and performance can vary significantly within the same company. We found considerable variation among companies on their priorities for economic development and how different business units of the same company performed. This variation did not appear to reflect different priorities among local stakeholders but rather a lack of internal consistency and alignment.
- Local stakeholders often do not adequately value company efforts. As a result, companies may not get enough credit for their contributions. This is sometimes due to the mismatch of priorities mentioned earlier and sometimes due to a failure to communicate, leading to a lack of understanding and support both within government and in local communities.
- Companies often fail to consider the business case for their development activities. Effective corporate performance on economic development and sustainability is not just a matter of money. No matter how copious a resource, the rents can never be sufficient to meet all of the demands of the host country with regard to infrastructure, healthcare, education, and other needs. It is therefore vital to undertake rigorous economic analysis to determine what benefits might come from additional investment. Companies, however, often fail to make such calculations and thus miss the chance to link investment to activities that will yield direct benefits, perhaps in the form of lower supply-chain costs, increased labor productivity, reduced project risks, or accelerated permitting.

**Exhibit 3** There are five core elements of a company’s local development contributions and one critical enabler.



Impact is not necessarily a matter of cost, either. One company significantly improved community relations and reduced the threat of operational disruptions by adopting measures as simple as enforcing speed limits for its trucks as they went through local villages.

*Exploring strategic moves that foster symbiotic relationships with governments.* Oil, mining, and other resource projects can last for decades; governments and businesses therefore need to develop a relationship that can last. That requires goodwill and flexibility on both ends. One common pitfall is to strike a hard-nosed initial

contract that maximizes short-term benefits but creates long-term resentment that could lead to pressure to renegotiate or even the withdrawal of the right to operate. A contract—and a relationship—is more likely to prove sustainable if companies ensure that the government is clear about the contribution the company is making and how it compares internationally so that both sides can see that they are getting a good deal. Conversely, governments need to be aware of the costs of renegotiation or even appropriation of assets. One extractive company operating in Africa shared a series of case studies with the host government that demonstrated how other resource-

driven countries were affected when their governments attempted to nationalize assets. The idea is to help host governments realize that they need the extractive company, just as the company needs them.

There are different ways of achieving this kind of partnership. In many cases, the extractive company has a technological edge that the country cannot otherwise access. Some companies cement relationships by developing and operating core infrastructure, such as local railways. Others have become global advocates for the host country on key issues of concern. The fundamental imperative for companies is to show that they are indispensable, or at least worth living with.



The resource landscape is changing radically. In the economies that will dominate future extraction, companies and host governments need to figure out how to work together for the long haul. Now is the time for businesses to reach a true understanding of the development needs of the countries where they will be operating and calibrate their approach to meet those needs. Only by doing so can they be sure that they can maintain their social license to operate—and secure a competitive edge. ■

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<sup>1</sup> For more, see *Resource revolution: Tracking global commodity markets*, McKinsey Global Institute and McKinsey Sustainability & Resource Productivity Practice, September 2013, on [mckinsey.com](http://mckinsey.com).

<sup>2</sup> Bernice Lee et al., *Resources Futures*, Chatham House, December 2012, [chathamhouse.org](http://chathamhouse.org).

<sup>3</sup> For more, see *Reverse the curse: Maximizing the potential of resource-driven economies*, McKinsey Global Institute, December 2013, on [mckinsey.com](http://mckinsey.com).

<sup>4</sup> *Macroeconomic Policy Frameworks for Resource-Rich Developing Countries*, International Monetary Fund, August 2012, [imf.org](http://imf.org).

<sup>5</sup> We use three criteria to identify which economies are driven by resources to a material extent: resources account for more than 20 percent of exports, resources generate more than 20 percent of fiscal revenue, or resource rents are more than 10 percent of economic output. Resources include energy and mineral commodities.

<sup>6</sup> For more, see *Resource revolution: Meeting the world's energy, materials, food, and water needs*, McKinsey Global Institute and McKinsey Sustainability & Resource Productivity Practice, November 2011, on [mckinsey.com](http://mckinsey.com).

<sup>7</sup> For more, see *Reverse the curse*; this report identifies six core elements that policy makers need to address: institutions and governance, infrastructure, fiscal policy and competitiveness, local content, spending the windfall, and broader economic development.

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