



Mining, Minerals and  
Sustainable Development

[www.iied.org/mmsd](http://www.iied.org/mmsd)

# MMSD Draft Report for Comment 4 March 2002

## Part II: Current Trends and Actors

# Chapter 3 A Profile of the Minerals Sector



International  
Institute for  
Environment and  
Development



World Business Council for  
Sustainable Development

Copyright © 2002 IIED and  
WBCSD. All rights reserved.

This Draft for comment is not the  
final report of the MMSD Project  
and it should only be cited with the  
word 'Draft' included. It may  
change to reflect errors of fact and  
balance of opinion based on  
comments received by the deadline  
date of 17 April 2002. IIED reserves  
all rights to make changes for  
inclusion in the final version.

Mining, Minerals and Sustainable  
Development is a project of the  
International Institute for  
Environment and Development  
(IIED) in London, UK.  
The project is made possible by the  
support of the World Business  
Council for Sustainable  
Development (WBCSD).  
IIED is a company limited by  
guarantee and incorporated in  
England. Reg. No. 2188452. VAT  
Reg. No. GB 440 4948 50.  
Registered Charity No. 800066

## Chapter 3: A Profile of the Minerals Sector

<i>Industry</i>	3
The Large Multinationals	4
Medium-Sized and National Players	7
Juniors	7
Fabricators	8
Recyclers	8
State-Owned Companies	8
Workers and Labour Unions	9
<i>Governments</i>	11
National Governments	11
Local Government	12
<i>Inter-governmental Institutions</i>	13
<i>Civil Society and NGOs</i>	14
<i>Communities</i>	16
<i>Financial Institutions</i>	16
<i>Consumers</i>	17
<i>Research Institutions and Universities</i>	17

Sustainable development requires a redefinition of roles and a strengthening of institutions dealing with economic development as well as social and environmental concerns. In the past, the key players in the minerals sector might include governments, a few companies licensed to extract minerals, and a few recognized traditional groups living in or near mineral reserves. In recent years, however, non-governmental organizations (NGOs), consumers, financing institutions, and inter-governmental institutions have all become more involved and focused greater attention on the minerals sector. The number of constituencies and their demands are thus far more diverse today.

At every level, from the international to the local, there are constituencies who consider themselves legitimate voices in the minerals sector. At times, their claims of legitimacy can be difficult to evaluate. Central to sustainable development is the need to understand who 'stakeholders' are, how to evaluate their legitimacy, how to ensure their accountability, and how to build their capacity. There is also a need to consider differing levels in capacity and differences in power among interested parties, not least because some participants lack power since they do not have the resources and information to be included in decision-making.

## Industry

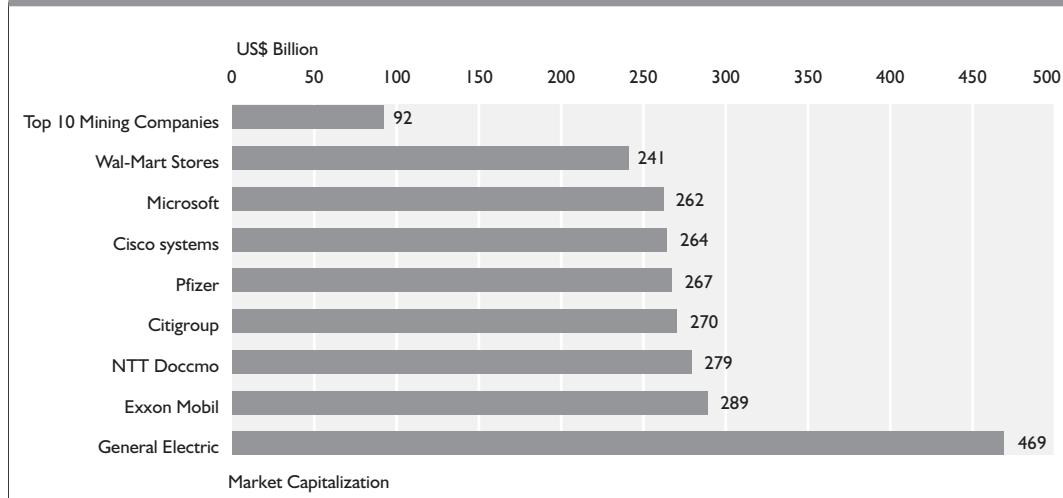
The globalization debate has brought a fresh appeal to the notion of 'corporate citizenship', as companies reassess what they need to do if the case for trade and investment liberalization is to be justified. The idea of corporate citizenship now lies at the heart of many efforts to reorient entire economic sectors towards sustainable development. In parallel, the UN Global Compact represents a new generation of thinking within the international community. It goes beyond the old inter-governmental processes that excluded the private sector save as a lobby group. The intention today is to ensure that corporations are partners in achieving the goals of sustainable development. As UN Secretary-General Kofi Annan has noted:

Global companies occupy a critical place in this new constellation. They, more than anyone, have created the single economic space in which we live. Their rights to operate globally have been expanded by international agreements and national policies, but those rights must be accompanied by greater responsibilities – by the concept and practice of global corporate citizenship...the willingness to pursue 'good practices' as defined by the broader community rather than taking advantage of the weaker regulatory systems or the unequal bargaining positions of host countries.<sup>1</sup>

In the global context, the minerals industry is relatively small. The top 150 listed international minerals companies had a combined market capitalization of only US\$320 billion at the end of 1999. This global total is lower than a number of individual companies such as General Electric and Exxon Mobil. (See Figure 3–1.) There is one striking difference between the mining industry and the oil and gas industry, with which it is often lumped statistically: while there are individual mine projects that are quite profitable, mining companies that do better than the average, and years that are better than others, the industry as a whole has not been doing very well. The mining industry exhibits volatile returns: over the past 25 years, it has failed to produce a long-term return that meets its cost of capital.<sup>2</sup>

**Figure 3-1. Mining Sector Capitalization versus Other Sectors**

Source: World Bank, July 2001 figures



The structure of the minerals industry is complicated and diverse. Some minerals and metals are produced mainly by large mining companies, while others may be produced primarily by small ones. The same mineral commodity can also be produced by large multinational companies operating huge mines, smelters, and refineries or by much small companies with operations at single sites. Some parts of the industry are vertically integrated through to the final consumer, while other parts are less concerned with where the concentrates go once they leave the mine site.

Artisanal and small-scale mining (ASM) plays an important role for some minerals, especially gold and precious gems. The profile, potential contribution to sustainable livelihoods, and environmental impact of this segment of the minerals sector is quite different from the players described here, so ASM is described in greater detail in Chapter 13.

Throughout the 1990s, mining companies, both large and small, became more international, driven by changing regulatory structures, lower ore grades in industrial countries with a long history of mineral extraction, and the opening up of several mineral-rich developing countries to foreign investment. But the industry remains largely fragmented, and the lack of linkages along the chain of production – from exploration through mining, metal production, fabrication, and recycling – has significant implications for any collective industry action towards sustainable development.

### **The Large Multinationals**

Large multinational corporations explore, mine, smelt, refine, and sell metal concentrates and metals on world markets. About 30–40 companies are in this category, although there has been increasing concentration in the last couple of years in response to low commodity prices and poor returns among the big players. (See Table 3-1 and Figure 3-2.) Recent mergers include, for example, BHP and Billiton, Cominco and Teck, and the acquisition of Asarco by Grupo Mexico. The concentration of producers of metals and minerals varies significantly. (See Table 3-2.) For coal and steel, the 10 largest producers manufacture less

than 30% of global output. But for platinum and molybdenum, the 10 largest account for more than 90%.

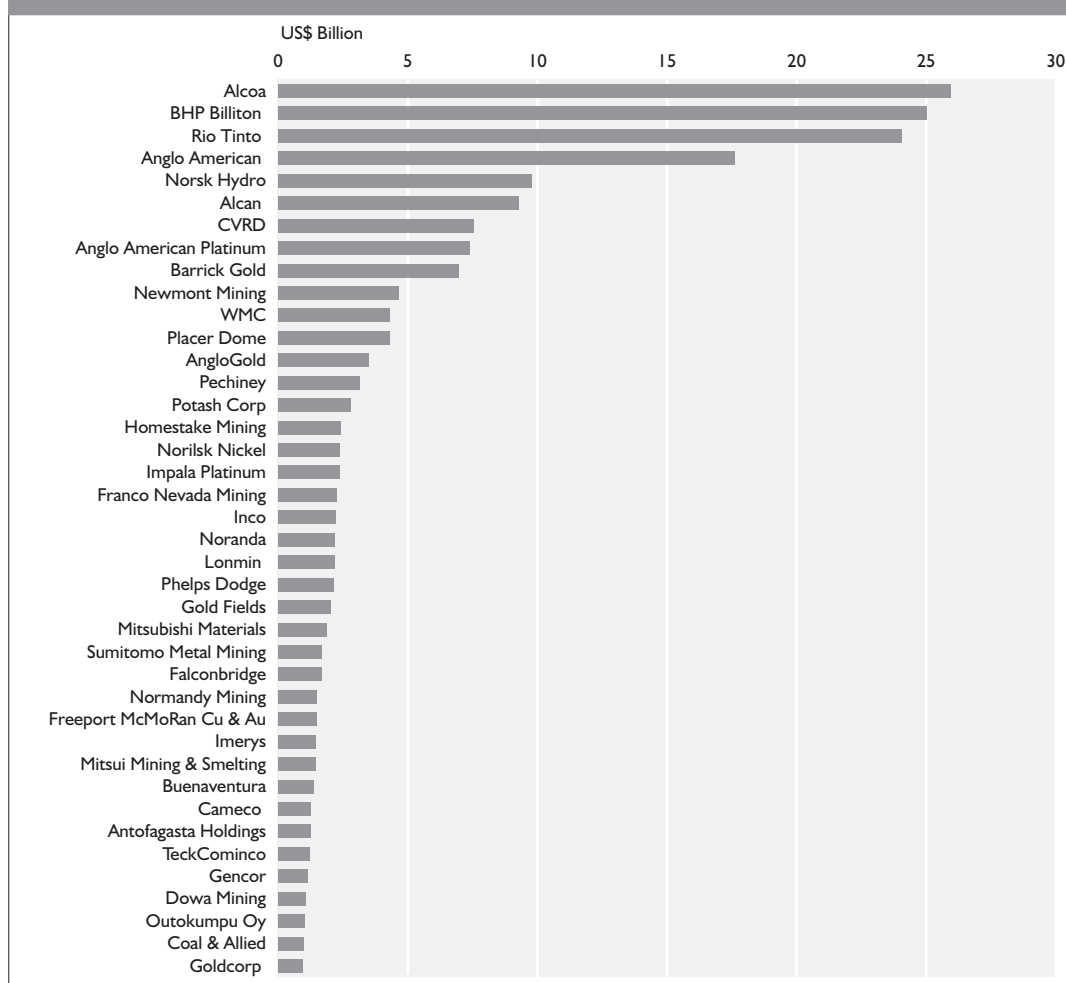
<b>Table 3-1. World's Largest Mining and Metal Companies</b>			
<b>Company</b>	<b>Home country</b>	<b>Sales (US\$ billion)</b>	<b>Main activities</b>
Alcoa	United States	23	Aluminium
Nippon Steel	Japan	22	Carbon and stainless steel
Anglo American	United Kingdom	21	NFMs, PGMs, coal, steel, forest products, ferroalloys, diamonds
BHPBilliton	Australia	19	NFMs, PGMs, coal, steel, oil & gas, ferroalloys
Posco	South Korea	11	Carbon & stainless steel
Rio Tinto	United Kingdom	10	NFMs, PGMs, coal, iron ore, industrial minerals, diamonds
Alcan	Canada	9	Aluminium

<b>Table 3-2. Top Five Producers of Selected Minerals and Metals</b>						
	<b>Iron Ore</b>	<b>Market share (%)</b>	<b>Coal</b>	<b>Market share (%)</b>	<b>Copper</b>	<b>Market share (%)</b>
1	CVRD (Brazil)	15.5	CIL (India) <sup>a</sup>	17.6	Codelco (Chile)*	12.36
2	BHP Billiton (Australia)	6.2	Peabody (Canada)	5.0	Phelps Dodge (USA)	7.8
3	Rio Tinto (UK)	8.8	BHP Billiton (Australia)	4.1	Rio Tinto (UK)	6.2
4	Caemi (Brazil)	2.5	Rio Tinto (UK)	4.7	BHP Billiton (Australia)	7.0
5	Kumba (South Africa)	2.5	RAG (Germany)	3.2	Grupo Mexico	5.5
	<b>Nickel</b>	<b>Market share (%)</b>	<b>Aluminium</b>	<b>Market share (%)</b>	<b>Gold</b>	<b>Market share (%)</b>
1	Norlisk (Russia)	19.1	Alcoa (USA)	14.4	AngloGold (South Africa)	8.3
2	Inco (Canada)	12.2	Alcan (Canada)	8.4	Newmont (USA)	6.7
3	Falconbridge (Canada)	7.8	Russian Aluminium	7.3	Gold Fields Ltd (South Africa)	4.7
4	BHP Billiton (Australia)	5.9	BHP Billiton (Australia)	4.0	Barrick (Canada)	7.6
5	Eramet (France)	5.3	Pechiney (France)	3.6	Placer Dome (Canada)	3.4

<sup>a</sup>State-owned.  
Source: CRU International Ltd (2001).

**Figure 3–2. Market Capitalization in the Mining Sector, 28 September 2001**

Source: NM Rothschild & Sons (Australia) Ltd, Bloomberg



Big producers of iron ore tend to be mining companies, not steel companies, and the trend in the industry is to move away from vertical integration. BHP Billiton is currently a significant producer of steel, but it plans to sell its steel division to concentrate on mining. Kumba Resources is a spin-off from Iscor, as the South African steel company wanted to separate its manufacturing and mining activities. Iron ore producers concentrate on countries with large individual deposits, rather than on a diverse group of countries. Of the top five iron ore producers, only Rio Tinto is active in as many as three countries.

BHP Billiton and Rio Tinto are also among the main producers of coal and the major producers of coking coal for the world export market. The largest single producer is the state-owned Coal India Limited. The other two big producers are private and are totally focused on coal and related businesses.

The biggest copper producers include two big mining groups and three producers that specialize in copper and, to a lesser extent, molybdenum. Codelco operates only in Chile, but the other companies operate further afield. Although the big nickel producers derive most of their revenue from nickel, by-product revenues (including copper, cobalt, and

precious metals) are significant for production derived from sulphide ores (Inco, Norilsk, and Falconbridge).

Aluminium producers tend to move in a world of their own. Of the largest aluminium companies, only BHP Billiton is a major participant in the mining of other commodity minerals. The big companies, apart from Russian Aluminium, usually have interests in smelting around the world. They are also likely to be integrated back into bauxite mining and alumina refining, and forward into semi-fabrication.

Among the multinationals, an important group are the custom smelters and refiners, usually based in Europe and Japan, which are largely focused on mineral processing. Some of these companies, such as Umicore of Belgium and Noranda of Canada, are pioneering ways to use recycled metallic materials and recover various metals from complicated multi-metal scrap.

These large, high-profile, multinational mining companies attract far more scrutiny from governments and NGOs than the middle-sized and smaller mining companies. Many of them have well-developed codes of practice and ways of doing business, as well as reporting procedures that take account of a broad range of environmental and social concerns. When a company like Rio Tinto or BHP Billiton opens a new mine, there is likely to be a substantial effort to assess, minimize, and mitigate many of the environmental and social impacts, to develop a proper mine closure plan, and to deal with the local community in a constructive and consensual manner. As these companies are publicly quoted, they will also be subject to financial market disciplines, which many smaller companies do not face.

### ***Medium-Sized and National Players***

A medium-sized private mining company often operates several mines, possibly in a number of countries; it is also likely to be a gold producer or a seller of base metal concentrates to custom smelters. For most regionally and locally traded minerals, medium-sized companies predominate. Many medium-sized metal processing and fabricating companies also operate mainly at a regional or national level. These companies may buy ore and concentrates to produce metal and non-metallic mineral products, or they may be involved further downstream in fabricating metal into products, such as pipe and tube or wire.

### ***Juniors***

Though often grouped under one heading, junior mining companies operate with many different philosophies. Two broad groups can be identified.<sup>3</sup> One type is involved in mineral exploration, seeking to negotiate option arrangements with larger players to develop ore body; these companies have exploration expertise but not the technical or financial resources to develop a modern large-scale mine. A small group of companies in this category could be called 'promotional juniors', since they focus on promotion and commodity prices rather than in-house geological expertise and are often guilty of activities that give the sector a bad reputation. The second type, in contrast, is more ambitious and may try to hold on to a controlling interest in the operating mine. The main difference between the two groups is that of time: the second group is much more likely to place more

weight on issues such as long-term reputation and long-term relationships with local communities and government officials.

Junior companies can be found in large concentration in some countries. Canada has over 1000 junior companies (in contrast to 100 in the United States), and they are particularly active in Latin America.<sup>4</sup> Other major centres for junior companies include Australia, operating largely in the Pacific Rim, and Europe, operating largely in Africa. As with the rest of the sector, juniors are diverse in their strategies, risk profiles, financial situation, commitment to long-term positions, relationships with majors, countries of operation, and so on. There is unquestionably a group of juniors that appear to be responsible for a substantial part of the bad practice and shoddy performance of the small mining sector. One of the challenges the sector faces is how to ensure that the performance of these companies is raised or that their licences to operate are removed.

### **Fabricators**

Fabricators are important players in the value chain for many metals. These companies convert primary metal products such as steel slabs and copper cathodes into usable metal products in a series of cutting, shaping, forming, bending, coating, welding, and other steps. The extent of vertical integration and the number of steps varies from metal to metal and from one end-use application to another. These companies vary hugely in size and nature of business, ranging from large, fully integrated multinational producers such as Phelps Dodge, which is involved in all stages of copper production from mining to wire making, to independent subcontractors operating a few pieces of welding equipment for steel plate in a single workshop. Thus it is impossible to make any generalizations about this part of the minerals cycle.

### **Recyclers**

Scrap merchants and recycling companies handle the collection and sorting of metal commodities for secondary production. Secondary smelters specialize in processing recycled metals. Scrap is also used as feed by the primary smelters and refiners and by the steel mills. Methods of scrap collection vary from 'mom and pop' operations with scrap metal (mostly aluminium and copper) piled in their backyard to large, sophisticated central collection and recovery centres such as those for lead-acid batteries.

The recycling business is critically important to the metals sector and for some of the non-metallic minerals. At all possible junctures, the mining companies and proponents of the sector promote the recyclability of metals as a major advantage of metals use in a more sustainable future. However, recyclability and the recycling rate are not the same. (See Chapter 11.) The recycling sector, in many cases completely disconnected from the primary producers, is often poorly organized, fragmented, and inefficient.

### **State-Owned Companies**

State ownership no longer accounts for a major share of world mining and metals activity, and most mining and processing is today in private hands. There has been a trend in the last 20 years towards the privatization of nationalized industries in general, of which mining has



made up just a small part of the world total. Privatization examples in the minerals sector include copper producer ZCCM in Zambia, tin producer Comibol in Bolivia, copper producer Tintaya in Peru, and Karaganda Steelworks in Kazakhstan, to mention just a few. State-owned companies are concentrated in a few countries, and in some countries, only on a few products. State ownership is still widespread in China, although the government is trying to encourage private ownership. In Chile, the large copper-molybdenum producer Codelco is state-owned, but most other mining and metallurgical activities are private. In some countries – for example, in Papua New Guinea – the state takes a small minority share in mining activities.

In Eastern Europe and the former Soviet Union, the states have sold off most of their more attractive nationalized assets, even though some of the less profitable enterprises are still state-run so as to maintain employment. Most mining enterprises in Iran are still state-owned. In Turkey, the mining holding company Eti Holdings is a state-owned group, although a privatized mining and metallurgical sector flourishes alongside it. India still has state-owned giants such as coal producer CIL, steel producer SAIL, base metals companies Hindustan Copper and Hindustan Zinc, and aluminium company Nalco; attempts at privatization have been few and far between, although a private-sector industry has sprung up alongside these companies in many areas. Various governments in the Middle East still operate mining and metallurgical companies.

### ***Workers and Labour Unions***

The modern mining industry in its best operations represents a remarkable advance from dire conditions in the past. In many parts of the world today, mine labour represents relatively high-wage work. The rates of accidents and injuries as well as occupational disease have been reduced to levels unimaginable just a few decades ago, in many cases as a result of collaborative approaches. Miners in these operations live in integrated local communities, where they and their families share the same social and educational opportunities as the society at large. When mines close, workers may have skills that are in demand elsewhere or the opportunity for training programmes to learn new job skills, along with a safety net of social benefits to support them during periods of unemployment. They are free to form and join unions, in an atmosphere that encourages management and other parts of the work force to focus on shared interests.

Even though gains have been achieved, this kind of progress is quite uneven through a global lens. Every one of the situations that were of concern earlier still exists somewhere in the world. Mine accidents that kill or disable workers are still frequent. Over 170 miners a year have died recently in the South African gold industry.<sup>5</sup> While statistics for China are unavailable or hard to interpret, it is known that there is a high rate of accidents in underground coal mines (see Chapter 13 also). Smaller Bolivian tin mines are another of numerous examples of this problem. Occupational illness can result from working conditions and exposures to chemicals. Miners still live in isolation in many parts of the world, or in overcrowded ‘boom towns’ with few social and cultural opportunities. The predominantly male workers, linked with groups of female sex workers, have led to the rapid spread of HIV in some parts of the work force.

World-wide, layoffs and mine closures have been a dominant feature in the industry in recent years. Reductions in the labour force have been dramatic as the former socialist economies have integrated into the world marketplace, as previously state-owned mines have been privatized, as large companies have mechanized, and as small companies have closed under the relentless advance of lower prices.

Despite better working conditions in recent years, the right to form free and independent unions for collective representation is still not recognized in some of the mining world, from some of the republics of the former Soviet Union to Colombia, where threats and attacks on union officials and organizers are reported to be frequent. These incidents are not restricted to the developing world but also occur in industrial countries, such as the coal miners' strike in the UK in 1978–79.

Until now, insufficient emphasis has been placed on the role of workers and labour unions as a key partner in sustainable development. Even though many unions are in dispute with mining corporations over issues of collective bargaining and representation, workers and trade unions are well placed to monitor and oversee industry practices. They are able to contribute to sustainable development in the work place by seeking compliance from their employer on issues such as the protection of workers' rights, equal opportunities, and worker safety.

At the community level, trade unions are able to contribute to the goals of sustainable development by playing the role of ambassadors of industry interest or understanding. At the national and international levels, trade unions participate in developing global policies that promote sustainable development through active consultation with industry leaders, governments, and inter-governmental institutions.<sup>6</sup>

At the global level, two organizations are particularly active on labour issues in the minerals sector. The first one is the International Federation of Chemical, Energy, Mine and General Workers Unions (ICEM). As of June 2001, ICEM represented 399 industrial trade unions in 108 countries, covering 20 million workers.<sup>7</sup> Many of these are employed in the mining industry. A key activity of ICEM is negotiating and monitoring global agreements with multinational companies. Activities of ICEM include the promotion of workers' rights and standards for health, safety, and environmental protection. ICEM makes representations on workers' behalf to national authorities and international bodies.

The second group is the International Labour Organization (ILO), whose work on labour and social issues related to mining can be traced back 70 years to the Hours of Work (Coal Mines) Convention of 1931. Unique in the UN system because of its tripartite structure (government, employer, employee), the ILO has hosted the development of at least 19 international conventions on aspects of work place health and safety and fundamental work place rights. A recent example is the 1995 Safety and Health in Mines Convention.<sup>8</sup> (So far, just 17 countries have ratified this.)<sup>9</sup> The ILO has also been involved in developing codes of practice and assisting national governments in implementing internationally agreed regulations on health and safety. Other areas of activity include industrial relations, employment, and small-scale mining.

A small number of ILO conventions deal with what are today recognized as ‘fundamental rights’. Freedom of association and collective bargaining and freedom from discrimination and forced labour are among these. But the ILO has also developed a more specific role in relation to the mining industry through the non-binding ILO codes of practice for mining and topics relevant to mining.

## **Governments**

Good governance includes the rule of law, effective state institutions, transparency, control of corruption, accountability in the management of public affairs, respect for human rights, and the participation of all citizens in decisions that affect their lives.<sup>10</sup> Governments need to be transparent, inclusive, and coordinated for long-term planning. While there may be some debates about the most appropriate form, the need for good governance cannot be disputed.

The recent emphasis on foreign direct investment and private-sector development has not diminished the role of the state. Far from it. Governments today, from national to regional to local, are seen to be the central ‘enabler’ of national economic development, providing that they are transparent, efficient, and aimed at inducing growth. But weak states and institutions continue to be one of the major impediments of effective governance today and of attracting investment. Mining companies are quite unlikely to invest in many mineral-rich regions because of the political risk.

### **National Governments**

National governments provide the overall framework of rules in which markets function and social processes take place, and they create favourable macroeconomic and political conditions for economic development. The needed conditions include, for example, a stable foundation of law based on equity, a non-distortionary policy environment, basic social services and infrastructure, protection of the vulnerable, and protection of the environment.<sup>11</sup> The record of governments has thus far been mixed.

With the emphasis on governance, national governments also need to put in place a ‘sound’ policy environment. From this perspective, the economic objectives of public policy are to encourage market activity (through, for example, the recognition and protection of well-defined property rights, dispute settlement, and a system of finance and banking); to promote economic efficiency when markets do not perform well (for example, to correct market failures, such as excessive environmental pollution, or to provide public goods, such as national defence); and to pursue equity, in the form of equitable distribution of income, wealth, and more generally the benefits and costs of various human activities.<sup>12</sup>

In the minerals sector, the national government is one of the most significant actors in managing the transition to sustainable development. Its responsibilities include reviewing environmental and social impact assessments, granting licences and permits, planning for regional or local development, upholding environmental standards with legislation and monitoring, protecting the rights of affected communities, and investing and distributing revenues from mineral development to build social and human capital. In many areas of the

world, however, governments lack the capacity to fulfil their duties due to scarce resources. In some cases, officials are also corrupt – and this inevitably means that many of the poorest peoples are excluded from sharing the potential benefits of mineral development.

A further challenge arises where local goals and customs are not in alignment with stated national goals, especially where the latter have been forced into a cultural framework without adequate local consultation.

### **Local Government**

The institutions or agencies of local governments are usually responsible for implementing the laws and regulations on mining that protect the public good, such as the right to set up, infrastructure provision, occupational health and safety, and environmental performance. Although private enterprises often find local bureaucracies slow or inefficient, the need for local government structures that enforce laws (and the regulations derived from them) and that are accountable to local citizens is not in doubt. Local government agencies need to provide the framework within which private or community land developers and infrastructure and service providers can operate, such as measures to ensure public accountability by industry and more competitive markets among private water suppliers and land developers.

The weakness and ineffectiveness of local governments in many countries in Africa, Asia, and Latin America can be partly explained by national economic weakness: effective local government is much more difficult without a stable and reasonably prosperous economy. Lack of resources and professional knowledge, as well as limited powers at the local level, are contributory factors. Since the late 1980s, there has been a growing recognition that the lack of democracy and accountability is a serious problem. In response, democratic reforms have been implemented at the local level in many countries. This shift in thinking from supporting government to improving governance has helped highlight the critical role of citizen groups and community organizations. It has also drawn attention to the need for a political, legal, and institutional framework that guarantees citizens civil and political rights and access to justice.

With the growing movement towards decentralization in many countries, local governments have an important role to play in the minerals sector. In some instances, they have succeeded without national support – for example, in the customary or locally approved exploitation of natural resources. Increasingly, they are assuming the responsibility for distributing revenues to local communities and for ensuring that minerals development is integrated into broader local planning. Invariably the ability of local government to perform these new roles is constrained by capacity deficits, confusion over the boundary of responsibility with central government, and lengthy bureaucratic procedures.

## Inter-governmental Institutions

In the minerals sector, inter-governmental or multilateral institutions have been most active in the areas of immediate relevance to security of investment, sovereign risk, and political risk assessment. The World Bank has been a significant player in the sector in the past decade. The Bank is in the midst of an Extractive Industries Review to consider its role. Other inter-governmental institutions involved with the sector include the Organisation for Economic Co-operation and Development (OECD), the UN regional economic commissions, the UN Environment Programme (UNEP), the UN Development Programme, the UN Conference on Trade and Development (UNCTAD), the World Trade Organization, the ILO, the UN High Commissioner for Refugees, and the Executive Office of the Secretary-General (through the Global Compact).

Each of these institutions has a specific role and varying capacities or resources to address issues related to the minerals sector. While many international organizations have been working to improve capacity in poor countries, their ability to help governments to do this is contingent on shrinking funds for overseas development assistance. Nevertheless, many of these institutions are today providing and convening important forums for debates, and are playing an increasingly active role in the development of voluntary measures. (See Table 3–3.)

<b>Initiative</b>	<b>Description</b>
Global Compact	Launched in 1999 by the Secretary General of the UN, a commitment by a network of organizations from business, labour, and NGOs to support a global set of principles for corporate social responsibility. Mechanisms for more specific sector-by-sector agreements are being explored.
Global Reporting Initiative (GRI)	Established in 1997 by the Coalition for Environmentally Responsible Economies (CERES) in partnership with UNEP to develop globally applicable guidelines through a multistakeholder process for reporting on economic, environmental, and social performance. The GRI is now developing specific guidelines for the mining sector.
OECD Guidelines for Multinational Enterprises	Adopted in 1976 with the objective of strengthening the basis of mutual confidence between enterprises and government authorities and promoting the economic, social, and environmental benefits of foreign direct investment and trade while minimizing the problems. A thorough review process was undertaken in 2000.
OECD Principles of Corporate Governance	Adopted in June 1999, the first multilateral effort to produce a common language of corporate governance. The principles are intended to assist both OECD and non-OECD governments evaluate and improve their own framework for corporate governance and to provide guidance and suggestions for stock exchanges, investors, corporations, and other parties that have a role in developing good corporate governance.

**Table 3–3. Inter-governmental Initiatives Relevant to the Minerals Sector**

ISO 14001	ISO 14001 is an internationally recognized environmental management system (EMS) standard developed by the International Organization for Standardization (ISO) in response to the 1992 Earth Summit. Approximately 30,000 companies in over 40 countries have received ISO 14001 certification and many as 300,000 companies have based their EMS on the standard, without seeking certification.
UNEP Declaration	The UNEP Declaration is a voluntary commitment to adopt improved sustainable production practices involving the continuous application of an integrated preventative strategy applied to processes, products, and services. In October 2000, the International Council on Metals and the Environment became a signatory to the UNEP Declaration. The Declaration is a set of high-level commitments that will need to be advanced with and through members of the International Council on Mining & Metals over time.

Source: [www.unglobalcompact.org](http://www.unglobalcompact.org); [www.un.org/esa/sustdev/viaprofiles/OECD\\_Guidelines.html](http://www.un.org/esa/sustdev/viaprofiles/OECD_Guidelines.html); [www.oecd.org/daf/investment/guidelines/mnetext.htm](http://www.oecd.org/daf/investment/guidelines/mnetext.htm); [www.iso.org](http://www.iso.org); [www.globalreporting.org](http://www.globalreporting.org); [www.unep.org/Documents/Default.asp?DocumentID=174&ArticleID=2621](http://www.unep.org/Documents/Default.asp?DocumentID=174&ArticleID=2621)

Many regional governmental institutions are involved in mining sector activities. The Southern African Development Community, under its newly formed Trade, Finance, Industry and Investment Directorate, deals specifically with mining in terms of the development and beneficiation of mineral resources consistent with broader policy objectives for the region.<sup>13</sup> Elsewhere, the Division of Natural Resources and Infrastructure at the Economic Commission for Latin America and the Caribbean has several mining-related programmes to determine the contribution of natural resources to sustainable development, for both large-scale and small-scale mining.<sup>14</sup>

## Civil Society and NGOs

Civil society encompasses a wide array of organizations of different types, sizes, and functions, including not-for-profit NGOs, community-based organizations (CBOs), faith-based organizations, cooperatives, and many more. Some employ thousands of people while others are run by one individual. They cover a multitude of issues and causes. NGOs and other indigenous and community organizations have become important actors in the mining sector in the past decade. In association with the media, they have become critical agents for stimulating greater corporate accountability through their power to influence public opinion and challenge government policies. Today, it is not enough for mining companies to win approval from national government for new developments: the acceptance of civil society is also necessary if the informal but all-important ‘licence to operate’ is to follow. This particularly applies to companies domiciled in the OECD but not only so.

The NGO movement is not homogeneous and it is misleading to talk of them as one group. It includes organizations that are global or regional, national, and local. Some NGOs have broad purposes (such as alleviation of poverty or wildlife conservation) and deal with the minerals sector only incidentally as it relates to these. Others are focused specifically on mining or even on particular mineral projects or mines. A few campaign against mining in a

generic sense because of its reliance on finite resources, but most who are concerned concentrate on questions relating to the performance of specific operations or companies. A small but increasing number (such as the World Wide Fund for Nature, Conservation International, and Transparency International) work in partnership at times with industry to improve best practice, but many more prefer to campaign against corporations and to keep their independence of them. Some address governments and inter-governmental institutions to argue for reform. Others work to ensure that communities and indigenous people have an effective voice. Judging from the experience of the MMSD regional processes, many NGOs are happy to engage in multistakeholder processes with industry and governments, provided that the rules of the game are clear.

NGOs concerned with this sector (or parts of it) have been attempting to develop a more unified policy. In November 2001, the Mineral Policy Center in Washington, DC, hosted an international meeting on Building a Global Mining Campaign. Participation from NGO representatives, activists, and community leaders was sought. The aim was to 'discuss the potential for a coordinated international campaign to improve the mining industry's global performance on environmental, social, cultural and human rights issues'.<sup>15</sup> The intention was to develop collaboration for a campaign that would stop what participants considered to be ill-conceived or irresponsible mines.

Despite these moves, some of the dilemmas faced by NGOs will remain. Many owe their reputation and visible public identity to campaigns based on single issues. Making trade-offs among competing values is not a highly developed part of their agenda – at least not yet with respect to mining. Many who are not from NGOs (and some who are) raise issues concerning the accountability and transparency of NGOs. From the industry perspective, all too often, the extent to which different NGOs represent different stakeholder groups is not known and is difficult to establish; who speaks for whom is a frequently heard question. It is clear that the level of internal democracy and participation in policy-making also varies dramatically. Many in the industry also question the capacity of NGOs to establish the facts of particular issue rather than to rely on secondary sources.

In reality, NGO constitutions vary. In some cases NGO leadership is elected by a broad base of members, who also participate in formulation of policy. In others, there is no membership, and leaders set any policies. Where the NGO raises funds from members, it tends to be more attuned to member priorities. Where most of the funding comes from a limited number of external sources, such as foundations or governments, there is often less accountability.<sup>16</sup>

Nevertheless, policies established by civil society organizations may have sufficient moral authority and public support in many regions of the world to serve as a standard for the behaviour of other organizations. Examples of this are Transparency International's principles of transparency and accountability, and the position statement on mining and associated activities in relation to protected areas produced by the IUCN World Commission on Protected Areas. (See Chapter 7.) No one can deny that NGOs are champions for change. Even the tracts that first established the very idea of sustainable development came from NGO sources.

## Communities

Debates over sustainable development require equal and adequate representation of communities affected by mining. The success of a project requires an understanding of its location and social context. The involvement of civil society at the community level varies with the degree of political openness in a country. Many international and national commentators around development issues acknowledge the failure to engage local communities and affected people in development decisions and to give them the opportunity and authority to participate in the decision-making process. This issue is not confined to the minerals sector. But one of the key challenges facing it today is putting in place mechanisms to ensure that communities can effectively engage in decision-making on issues that affect them. (See Chapter 9.)

There is a great need to strengthen community-based organizations and their ability to represent their views effectively at all levels. In May 2001, some CBOs came together in a meeting in London entitled *Communities Addressing the Corporate Challenge: The Case of Mining*. This was initiated to provide a forum for discussion among partners of Christian Aid with an interest in the impacts of mining operations. Key issues addressed included codes of conduct for the mining industry, appropriate modes of dialogue between mining companies and communities, the role of central and local government, relationships between mineworkers and communities, and the impacts of mining on women and youth. Participants issued a London Declaration, which demanded a series of actions, including an end to all new large-scale mining projects in 'greenfield' areas of Asia, Africa, and Latin America. It also proposed that mining companies should accept complete responsibility for the impacts of their actions. The declaration called on international financing institutions to end the funding of industry-initiated mining codes.<sup>17</sup>

There is a potential for NGOs skilled in community development to work with various components of the mining sector. But that potential is as yet largely undeveloped. Either the sector itself will have to develop such skills or it will have to employ intermediaries in greater numbers.

## Financial Institutions

Commercial banks are the main providers of debt financing to the minerals sector, the source of both project and corporate financing. Commercial banks provided the bulk of finance for 160 mining projects worth over US\$50 billion between 1996 and 2001.<sup>18</sup> The multilateral financial institutions, such as the World Bank Group and the regional development banks, have a broader mandate than providing finance, but they do provide additional funds when commercial financial institutions are unwilling or unable to. This funding can also be very important in raising the level of confidence that a particular project enjoys, and can attract other sources of finance.

The World Bank has a set of detailed environmental and social guidelines for its lending activities, as well as some specific policies on the mining sector. These are broadly applied by private lenders, export credit agencies, regional banks, and others even where no World



Bank financing is involved. Banks make significant efforts to analyse risks, and many expect adherence to World Bank and International Finance Corporation guidelines as a minimum.

This is not the place to set out an analysis of the international financial community in influencing or setting standards for the sector. That they are important is not in doubt. Suffice to say the policies of multilateral banks (led by the World Bank) have challenged the capacity of borrower countries to implement their requirements. As their standards are used as yardsticks by others, they are an important policy instrument. Not all believe the standards are always applied as some suggest that performance criteria for staff have tended to be related to approvals and disbursement targets rather than any sustainability criteria.<sup>19</sup>

## **Consumers**

In the context of mining and minerals, the term ‘consumer’ can be used to describe all users of products containing mineral commodities. This includes manufacturing companies of different sizes, service industries, and governments (through their purchase of goods) as well as private individuals.

The most influential consumers of minerals are large manufacturing companies. In terms of sustainable development, the activities of the manufacturing industry are significant in several regards: the quantity of minerals used in a product, the manner in which the product is used, the source of the components or raw materials, and to whom products are sold. Decisions taken by leading manufacturing companies can be an important driver for change, as demonstrated in the forest products sector, though the same is yet to take place for mineral commodities. Due to the lack of interest of large metal consumers, there is currently no mechanism to pass increased social and environmental costs on to the final consumers.

Most consumers of mineral products (with the possible exception of fabricators of raw metal products) feel remote from mining and minerals processing companies. This separation between production and consumption is often a physical one, but it is also due to the complexity of many manufactured products, which may contain small quantities of many mineral commodities combined with other materials and distributed in hundreds of components. This disconnect between the producers and consumers of minerals poses serious challenges for the sector to move forward in a sustainable fashion. (See also Chapter 11.)

## **Research Institutions and Universities**

To meet the challenges of sustainable development, the minerals industry and others in the sector now more than ever need a steady supply of skilled professionals. The training of these professionals needs to adjust as mineral development becomes more complex and technical and as industry is asked to take on more responsibility for issues outside the usual training of mining engineers or metallurgists.

A number of global research initiatives look more directly at issues relating to mining, minerals, and sustainable development. Academic institutions are significant contributors to current knowledge of the sector. Two of the most significant of these are:

- *Mining and Energy Research Network (MERN)* – This international collaborative research network, involving 140 research centres across the world, is based at the University of Warwick, United Kingdom. MERN's aim is to inform socially responsible decision-making in mining companies.
- *Mineral Resources Forum (MRF)* – This is an internet-based system for coordination of work on the relationship between mining, minerals, and sustainable development. The aim is to bring together governments, inter-governmental entities, resource companies, other concerned organizations, and civil society for discussion and information exchange. The MRF was established as an initiative of UNCTAD in partnership with UNEP.<sup>20</sup>

## Endnotes

<sup>1</sup> Annan (2000).

<sup>2</sup> MacDonald (2000).

<sup>3</sup> This categorization is taken from Marshall (2001). For a detailed typology, see, for example, MacDonald (2000) or MacDonald (2001).

<sup>4</sup> MacDonald (2001).

<sup>5</sup> Chamber of Mines of South Africa (2001).

<sup>6</sup> Presentation of Fred Higgs, Secretary General of ICEM, at the MMSD Workshop on Managing Mineral Wealth, London, 15-17 August 2001.

<sup>7</sup> International Federation of Chemical, Energy, Mine and General Workers Unions (ICEM) website, <http://www.icem.org>

<sup>8</sup> Governments that ratify the convention commit to providing inspection services and the designation of a competent authority to monitor and regulate the various aspects of occupational health and safety in mines. The convention also sets out procedures for reporting and investigating disasters, accidents, and dangerous occurrences related to mines, and for compilation of the relevant statistics. Both workers' and employers' rights and responsibilities are set out. A non-binding recommendation that accompanies the convention provides more specific guidance on different sections of the convention.

<sup>9</sup> ILO (1995).

<sup>10</sup> See, for example, Annan (2000) or World Bank (2001).

<sup>11</sup> World Bank (1997).

<sup>12</sup> Eggert (2001).

<sup>13</sup> See SADC webpage, <http://www.sadc.int>.

<sup>14</sup> See ECLAC - Division of Natural Resources and Infrastructure web page, <http://www.eclac.cl/drni/>

<sup>15</sup> See Mineral Policy Center – Building a Mining Global Campaign web page: <http://www.globalminingcampaign.com/index.html#ORG>

<sup>16</sup> Presentation on the Trans-national Civil Society Seminar, 2001, London School of Economics, London, 1-2 June.

<sup>17</sup> Christian Aid et al. (2001).

<sup>18</sup> From Mining Finance Database, published by Mining Finance Magazine (October 2001), as cited in UNEP (2002).

<sup>19</sup> The World Commission on Dams (2000).

<sup>20</sup> See the Minerals resource Forum web page, <http://www.mineralresourcesforum.org>

