

*Africa Review Report on Mining
(Executive Summary)*



United Nations
Economic Commission for Africa

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1. Introduction

1. General Assembly Resolution A/Res.58/218 mandates the United Nations Regional Commissions, in collaboration with the United Nations Commission on Sustainable Development (CSD), Governments, United Nations funds and programmes, other organizations of the United Nations system, international financial institutions, and all relevant international and regional organizations to organize multi-stakeholder Regional Implementation Meetings (RIMs) and to provide regional inputs into the work of the CSD. In this context, the United Nations Economic Commission for Africa (ECA) has been organizing RIMs in collaboration with partner organizations since 2003.

2. In preparation for the Eighteenth Session of the UN Commission on Sustainable Development (CSD-18), the Africa RIM was held in October 2009 under the auspices of the Sixth Session of the Committee on Food Security and Sustainable Development (CFSSD-6). ECA organized the RIM in collaboration with the United Nations Department of Economic and Social Affairs (UNDESA), the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organization (UNIDO) and other partners. The RIM reviewed progress in the implementation of Agenda 21 (A21), the Programme for Further Implementation of Agenda 21 (PFIA21) and the Johannesburg Plan of Implementation (JPOI) commitments relative to the thematic areas of Transport, Chemicals, Waste Management, Mining, and A Ten-Year Framework of Programmes on Sustainable Consumption and Production (SCP).

3. This executive summary draws from the Africa Review report on mining which was prepared by ECA for the Africa Regional Implementation Meeting (RIM) for CSD-18. The review was primarily based on paragraph 46 of the JPOI and included the following areas:

- a) Effective and transparent regulatory frameworks;
- b) Transparency and accountability;
- c) Governance and public participation;
- d) Environmental, economic, social and health impacts and benefits;
- e) Value addition, R&D and technological information;
- f) Artisanal and small scale mining; and
- g) Building human and institutional capacities.

4. The report provides an overview of the significance of the mining sector in advancing Africa's sustainable development agenda. It outlines key emerging issues in

the mining sector in Africa and progress made towards implementing mining-related commitments in the above areas. Furthermore, it identifies implementation challenges and constraints, highlights lessons learnt and proposes recommendations, including policy measures needed to accelerate implementation.

2. The mining sector in Africa

5. *Significance of the mining sector in Africa* - Africa is well endowed with mineral resources. It harbours the world's largest mineral reserves of platinum, gold, diamonds, chromite, manganese, and vanadium¹. Table 1 illustrates Africa's mineral potential and production in global terms. Yet these statistics are probably underestimated due to limited geological mapping of the continent. In addition, the continent produces about 17 per cent of the world's uranium. Most of these minerals are exported as ores, concentrates or metals without significant downstream processing to add value. This has led to the persistent belief that the untapped mineral potential can act as a springboard for Africa's industrialization.

Table 1: Some leading African mineral resources, 2005 [ECA and African Union, 2008].

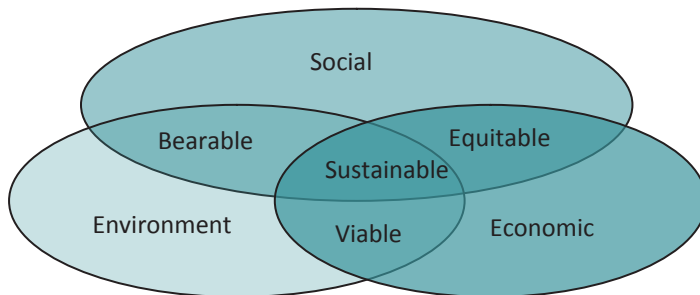
MINERAL	AFRICAN Percent OF WORLD PRODUCTION	RANK	AFRICAN Percent OF WORLD RESERVES	RANK
Platinum Group Metals	54 Percent	1	60+ Percent	1
Phosphate	27 Percent	1	66 Percent	1
Gold	20 Percent	1	42 Percent	1
Chromium	40 Percent	1	44 Percent	1
Manganese	28 Percent	2	82 Percent	1
Vanadium	51 Percent	1	95 Percent	1
Cobalt	18 Percent	1	55+ Percent	1
Diamonds	78 Percent	1	88 Percent	1
Aluminium	4 Percent	7	45 Percent	1

6. *The African Mining Vision* - The African Mining Vision (AMV) was conceived in preparation for the First African Union Conference of Ministers Responsible for Mineral Resources Development. It was drafted by a technical taskforce of the International Study Group (ISG) on Africa's mineral regimes, a project of ECA. The vision advocates for "transparent, equitable and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socio-economic development". The vision is therefore consistent with the principles of sustainable development, wealth creation and the integration of the mining sector into Africa's social and economic development process.

1 ROAPE No. 117 2008 – Ray Bush

7. Looking at successful resource-based development strategies elsewhere, it is clear that mineral resources can catalyse broad-based growth and development provided opportunities to “deepen” the resources sector, through the optimization of linkages into the domestic economy, are exploited.

8. *Sustainable development and mining* - Mining by nature is inherently unsustainable in that the life of the mine is limited and will eventually come to a close. However, its sustainability can be ensured by the linkages (downstream, upstream and side stream) it forms with other sectors of the economy. Sustainable development as defined by the World Commission on Environment and Development (WCED) in its Brundtland report - Our Common Future (WCED, 1987) is “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs”. However, this widely-used definition focuses on intergenerational equity and a further expansion of the standard definition was made during the 2002 World Summit on Sustainable Development, using the three pillars of sustainable development: economic, social, and environmental². The Johannesburg Declaration created “a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development at local, national, regional and global levels.”



Scheme of sustainable development at the confluence of three constituent parts³

9. During the colonial era in Africa, the mining sector was used to develop the economies of western nations with no attention to the sustainable development of the sector. This has not changed much in the post-colonial era. Although the benefits of mining to national economies are evident, local costs (environmental and social impacts) associated with mining, especially to local communities, are not being adequately compensated for. The mining sector reforms of the 1980s and 1990s under the auspices of the World Bank (WB) and International Monetary Fund (IMF) did not help the situation as they were aimed at attracting Foreign Direct Investments (FDIs). The reforms also received criticism for the magnitude of special incentives

² April 2005 issue of Environment: Science and Policy for Sustainable Development, Volume 47, Number 3, pages 8–21

³ Sustainable development -Wikipedia

offered to mining companies. The reforms have arguably reduced the share of rent, on which African governments depend, to fund their social and economic development programmes. There is also the argument that mining has not been mainstreamed into development-oriented policies, as exhibited by weak linkages into the local, regional and national economies.

10. Dependence on mining rent alone can hamper development by shifting focus from broader economic development issues and the expansion of other productive sectors. This often relates to the so called Dutch Disease or Resource Curse in which high mineral revenues limit structural diversification; and economies fail to translate resource abundance into sustainable growth that uplifts peoples' lives. Ideally, mining should spur the development of spin-off sectors that supply mining companies with a range of inputs. These sectors, although initiated by mining, can be applied to other development areas of a country, thus precipitating the lateral migration of mineral-related technologies.

3. Major trends and emerging issues

11. Generally, there has been a dramatic increase in the global metals intensity of use since adoption of the JPOI. This is unlikely to decrease despite the recent global economic crisis and the drop in commodity prices, due to the robust demand from growing Asian economies such as China and India. The increased metal intensity of use has caused historically high metal prices which have permitted the mining of lower grade and difficult-to-access ores, resulting in higher energy use and more waste. The commodity boom and subsequent economic crisis have also resulted in a greater concentration of global mining capital (mergers and takeovers), while there has been a reduction of junior exploration and mining activity. This has led to a decline in African exploration and an increase in the bargaining power of the large mining companies, and consequently their leverage on the negotiation of mineral contracts with African States.

12. There has been improved stability in the political and economic environment and this has led to increased investment in the African minerals sector, but very limited or no investment in the minerals linkage sectors. There is also an emergent realization that mining could be a key instrument in establishing infrastructure (transport, energy and water) for the development of other sectors, such as agriculture and forestry. This is embodied in the NEPAD Sustainable Development Programme (SDP) initiative and also in the AMV. The following trends have been observed in the specific areas under review.

13. *Effective and transparent regulatory regimes* - There has been a growing trend to accommodate the socio-economic development imperatives of host countries.

Consequently, there have been increased calls for national mining policies and legislation to embrace broader development goals as reflected, for example, in the AMV. This includes considerations for the mineral value chain in the socio-economic development context of the country, closure of mining operations and reclamation of land for other uses.

14. Legislation has been moving towards streamlining reporting requirements while reducing arbitrary discretionary powers of administrative offices. The recent high commodity prices have generally brought about the realization that mining contracts have been skewed in favour of mining companies. The equitable sharing of benefits has therefore emerged as a key issue with mining countries seeking improved contracts. At the *subregional* level, the harmonization of mining codes and policies has also emerged as a key trend.

15. *Transparency and accountability* - Contracts between governments and mining companies are often performed in secrecy, with confidentiality clauses that prevent the public (the owners of mineral wealth) from knowing exactly what revenues are given to the State and what rights and privileges have been awarded to the mining companies. In essence, this stems from inadequate democratic governance structures and institutional capacities in the area of revenue management. These drawbacks are compounded by a weak civil society that cannot engage government in revenue accounting matters. To increase transparency and accountability, there has been a trend towards increased membership of the Extractive Industries Transparency Initiative (EITI) and the emergence of EITI++ and KPCS⁴. There has also been an increase in the participation of civil society organizations, non-governmental organizations (NGOs), and communities in initiatives such as Revenue Watch and PYP.

16. *Governance and public participation* - Governance in the context of this report relates to the legal and institutional environment in which various actors in the mineral sector interact. Generally, there has been a trend towards improved multi-stakeholder interactions with greater community participation in benefit sharing, and consultations moving from a paternalistic to a partnership approach. There has also been an increase in multi-stakeholder involvement in the development of mineral policy and legislation. African participation in ownership of mineral assets has increased (usually as part of the so-called Black Economic Empowerment (BEE)), as has gender awareness and female involvement in mining and mine ownership.

17. *Environmental, economic, social and health impacts and benefits* - Increase in the negative environmental impacts caused by mining activities, coupled with disruption of local social values, traditional norms and livelihoods have resulted in environmental and social requirements becoming major features of national mining legislation. Such requirements include environmental and social impact assessments (ESIA) prior to the granting of mineral licences and environmental and social

4 Kimberly Process Certification Scheme

funds. The increased use of ESIA's has partly benefited from companies subscribing to international standards, such as the UN Global Compact, the Global Reporting Initiative, the IFC Performance Standards, the Equator Principles, and the Universal Declaration of Human Rights and associated agreements, and the OECD Guidelines for Multinational Enterprises. This has had the effect of improving corporate social responsibility, with mining companies taking the view that corporate social responsibility (CSR) is part of doing good business. Also, communities around mining areas have a newly found sense of entitlement and increasingly demand economic benefits, a healthy environment and respect for human rights around resource extraction areas. A negative environmental trend, however, is the increase in energy consumption, due to the minerals boom. This has caused greater reliance on fossil fuels (hydrocarbons and coal) with concomitant deleterious environmental impacts.

18. From an economic viewpoint, the reforms of the 1980s and 90s have opened up many African countries to private mining investment. Yet this shift has not always been beneficial, as governments are forced to make major concessions to attract mining capital into their economies due to strong global competition for such capital. Taxation of the minerals industry remains an issue between governments and mining companies due to the perceived conflict between what constitutes just compensation for the risks mining companies take and equitable resource rents accruing to the owners of mineral wealth. There is a trend, though it lacks unanimity, towards sharing tax revenues between central, regional and local governments with local communities receiving a proportion of mining taxes.

19. *Value addition, research and development and technological information* – Despite available opportunities, very little value is added to Africa's mineral products. On the contrary, the increased commodity demand has led to an increase in exports of ores and concentrates. This has led to increased calls for development-oriented mineral policies which include instruments to increase value addition. There is also increased awareness that value addition encompasses more than mineral processing, and includes all aspects of the mineral value chain, such as local inputs and services into the mineral sector. Further, there is the realization that research and development, and technological information are the basis for creating value added to the minerals sector.

20. *Artisanal and small-scale mining* - ASM is usually a labour-intensive sector and hence presents a greater opportunity for job creation than do large-scale operations, especially in rural areas. There is the realization that strategies for artisanal and small-scale mining need to be rooted into broader rural development plans and that there is need to provide greater support to address a range of shortcomings including technology, marketing, and skill deficiencies. There has been growing awareness to address the poor environmental and healthy practice characteristic of ASM. It is further recognized that ASM has negative impacts associated with child labour and the impoverishment of miners.

21. ***Building human and institutional capacities*** - Companies in the extractive industry mostly engage in programmes to improve the health, education, and skills of employees and mining communities, usually as part of their CSR agenda. Extractive companies are also engaged in activities that contribute towards building external institutional capacity that is usually necessary in developing countries to move forward with value addition. Typical activities include providing funding to universities for student bursaries, and support for research centres and professorial chairs.

22. There has been an increase in technical support for formulating improved mining policies, legislation and guidelines. Partly in response to trends in development cooperation towards ownership, coordination and alignment, there has been a shift from programme funding to budget support to provide flexibility to adapt development aid to local circumstances. Technical support has also been extended to developing and consolidating geo-scientific information into geographical information system (GIS) frameworks, improved environmental and ESIA management processes, and increased attempts to reduce the negative environmental impacts of ASM processing methods, such as reduced use of mercury and cyanide.

4. Action taken and progress made

23. ***Effective and transparent regulatory frameworks*** - At the *national level*, most African mining countries have rewritten their mining codes in the last 20 years to reflect a shift from government as an owner/operator to regulator/administrator, with the private sector assuming the lead in mineral development projects. Countries which have gone this route include the Democratic Republic of the Congo (DRC), Ghana, Guinea, Namibia, Nigeria, the United Republic of Tanzania and Zambia. The new codes have been aimed at attracting FDIs, driven by the need to privatize mining projects and have not necessarily been development-oriented. Many of the new regimes have been driven by the World Bank, IMF and Commonwealth Secretariat and have not generally included broad consultations with key stakeholders. In several cases, however, the new codes have involved extensive consultation as has been the case in Malawi, Namibia and South Africa.

24. Since the commodity boom of the past three years, and the growing recognition that the original terms and conditions of mining legislation unduly favoured the private sector, there has been a trend towards amending mining codes and re-negotiating mining contracts. Key examples include the DRC, Liberia, Sierra Leone and Zambia. There has also been progress in decentralizing administrative systems as exemplified by the DRC, the United Republic of Tanzania, Sierra Leone, and South Africa. However, devolution has exacerbated existing capacity weaknesses within the executive branch.

25. At the *subregional level*, efforts to harmonize mining codes have increased across the continent, emphasizing the need for transparent regulatory frameworks

and efficient administrative systems, including one stop shops in mineral licensing and reporting systems. Three sub-regions namely, the Southern African Development Community (SADC), the Economic Community of West African States (ECOWAS) and the Economic and Monetary Union of West Africa (UEMOA) have made concrete steps towards harmonizing their national policies, laws and regulations and developing common standards to create a uniform business environment for investors. ECOWAS has recently adopted the “Draft ECOWAS Directive on the Harmonization of Guiding Principles and Policies in the Mining Sector”, which seeks to create a common mining code for West Africa, underpinned by a participatory approach, sustainable socio-economic development, poverty reduction, environmental protection, good governance and respect for human rights.

26. In 2006, SADC adopted a Framework for the Harmonization of Mining Policies Standards and Regulatory Frameworks”. The framework comprises policy guidelines in key areas of the SADC mineral economy namely: mineral development issues such as mineral rights, value addition and ASM; macroeconomic and business climate which include tax issues, governance, environmental management and social (people-based issues).

27. At the *regional level*, in 2007, ECA convened the Big Table meeting on “Managing Africa’s Natural Resources for Growth and Poverty Reduction”. The Big Table is an annual meeting of African Ministers and their OECD counterparts, convened specifically to address the most pressing continental developmental challenge of the day. The outcome of the Big Table meeting triggered initiatives, such as the Extractive Industries Transparency Initiative (EITI++), the African Legal Support Facility (ALSF), and the International Study Group to Review Africa’s Mining Regimes (ISG).

28. The ISG is a two-year project established to explore how best Africa’s mining regimes can contribute to Africa’s sustainable development through broad national and regional economic and social development goals. It has been involved in the formulation of the African Mining Vision and has authored a number of study reports to elucidate key elements of mineral regimes in Africa.

29. The “First African Union Conference of Ministers Responsible for Minerals Development”, was held in October 2008 and it adopted the “Addis Ababa Declaration on Development and Management of Africa’s Mineral Resources”. The Declaration calls on the African Union Commission (AUC), in collaboration with ECA, AfDB, the Africa Mining Partnership (AMP), the Regional Economic Communities (RECs) and other stakeholders, to formulate a concrete action plan for the realization of the AMV. The Declaration also reaffirmed Africa’s commitment to prudent, transparent and efficient development and management of its mineral resources to meet the MDGs, eradicate poverty, and achieve rapid and broad-based socio-economic development. To this end, the ministers undertook to build on the work of the International Study Group (ISG) and improve Africa’s mineral policies, legal, regulatory, and administrative

frameworks under the leadership of the AU and in collaboration with ECA and the AMP. The ministers also called on the AfDB to operationalize the African Legal Support Facility (ALSF) to strengthen the capacity of African member States to negotiate better mineral contracts

30. *Transparency and accountability* - African countries have increasingly signed up to global initiatives, including the EITI, EITI++ and the Kimberly Process Certification Scheme, to improve transparency and accountability in the mineral sector. EITI candidate countries⁵ include Burkina Faso, Liberia, Ghana, Mozambique, the Niger, Nigeria, Madagascar, the United Republic of Tanzania and Zambia. Some countries, notably Liberia and Nigeria, have gone further and developed legislation to require the adoption of EITI principles. Regrettably, these initiatives are largely voluntary and depend upon the interest and will of countries to assimilate and enforce the standards and rules that emanate from them. In some instances, however, there may be external factors that push countries to adopt the standards set by these initiatives. For example, the International Finance Corporation prefers to invest in countries that are implementing the EITI principles. Furthermore, while there are as many as twenty candidate African countries, none appears to have reached compliant status. There is a sense, therefore, that the implementation of these transparency initiatives needs to be speeded up.

31. *Governance and public participation* - At the *national level*, there has generally been an improvement in the participation by communities in mining projects and in benefits accruing to communities. From a policy-making viewpoint, there have been notable examples of countries employing the multi-stakeholder approach as happened in Malawi, Namibia, South Africa and the United Republic of Tanzania. Generally, however, Governments still see policy-making and regulation of the mining sector as their sole responsibility. Many African countries do not have sustainable development principles in their national mining policies. Local equity participation in mining projects is also not seriously promoted nor embedded in law as is the case in South Africa. As a result, participation of nationals in large-scale mining projects is not commonplace in many African countries. Countries with empowerment schemes, like South Africa, have fared better, but they are the exceptions.

32. Improvements in community participation have been facilitated by mining companies subscribing to international CSR-based schemes. While this applies to high profile mining companies, smaller ones are not held to the same standard of accountability. Traditionally, CSR in the mining sector has been voluntary. However, there has been an increasing awareness that CSR must be grounded in some form of policy legislation or other mandatory agreements. Countries that have implemented a legislative approach include Nigeria and South Africa. Other countries, such as

5 A country that has fully and to the satisfaction of the EITI Board met the sign-up indicators becomes a candidate country. It then has two years to be validated as a compliant country.

Ghana, the United Republic of Tanzania, the DRC, Namibia, are increasingly seeking to entrench CSR in their policy frameworks.

33. At the *subregional level*, harmonization frameworks, like that of SADC, have embraced the need to have uniform governance and CSR standards. The SADC framework also emphasizes the participation of nationals in mining projects and benefit sharing with communities around mining projects. It further encourages the participation of women in the minerals sector, based on the SADC Gender Protocol.

34. *Environmental, economic social and health impacts and benefits* - Significant *national level* strides have been made in the inclusion of environmental and social requirements in African mineral regimes. The new legislative and regulatory regimes emerging in most countries now include requirements for an environmental impact assessment (EIA), although less so for social impacts. The requirement for both social and environmental rehabilitation funds is still not very prevalent despite the popularity of EIAs. Even in countries where social and environmental funds are included in the legislative framework, and ESIA is a mandatory requirement, the provisions are often not fully implemented because of capacity constraints within government and the lack of involvement of other stakeholders to enhance compliance. This is for example the case in the United Republic of Tanzania and Zambia.

35. Agreements between mining companies and communities that include provisions to ameliorate the negative impacts of mining are becoming increasingly common, such as in Mali, Ghana and the DRC. Revenue sharing with communities and local authorities has slowly been increasing although not yet widespread. Most governments still centrally retain all mineral revenue at the national level. Ghana, Sierra Leone and South Africa are among the notable exceptions. Overall, revenues from mineral commodities increased dramatically in 2008 due to buoyant demand particularly from China and India. What is not clear yet is how this has impacted revenue distribution and developmental priorities at the domestic level.

36. The mining sector does not generally have sufficient economic linkages in most countries. However, new policy frameworks encourage linkages, such as local procurement and employment, and small business development at both the community and national levels. Though desirable, such economic linkages are not, however, widespread with the exception of South Africa, where they are part of social and labour plans. While environmental, economic and social sustainability requires a comprehensive policy on land use, most African countries do not have provisions for land use.

37. Progress has been made in addressing health and its social impacts relative to mine workers and mining communities. This is largely attributable to improved CSR by mining companies, which offer programmes to help those suffering from HIV/AIDS, malaria and TB. These diseases pose the biggest threat to the health of mine workers, their families and the communities they live in. Mining companies have

long since recognized that protecting the health of their workers not only increases productivity but also ensures the longevity of mining projects, particularly at operations with long lifecycles.

38. A positive development has been the reduction in mineral resource-based conflicts particularly in Angola, Côte d'Ivoire, the DRC, Liberia and Sierra Leone. These countries now face the challenges of reconstructing the mining sector through new and effective mineral policies and legislation, renegotiating mining contracts and developing mineral agreements and concessions that guarantee a fair return to the national economies. Even where legislation is in place, such as in the DRC, there remains a major challenge of implementation due to the persistent attributes of a war economy in the eastern Congo, in which Government control over mineral resources, at best, is difficult.

39. At the *regional level*, the African Legal Support Facility launched in 2009 by the African Development Bank, should help member States negotiate improved contracts that support the sustainable development of the extractive sector. The facility will operate as a legal and technical service provider to member countries, allowing them access to sound advice in a range of areas that include commercial creditor litigation, debt management and negotiations of complex transactions.

40. *Value addition, research and development, and technological information* - This is a very underdeveloped aspect of the African mineral sector. Many of the industrial and or mineral policy frameworks of African countries do not place sufficient emphasis on beneficiation and creating manufacturing value added. Strategies and incentives for value addition are not well articulated, with a few exceptions like South Africa, which has an innovation fund for research and development (R&D) into value addition to mineral products and excellent infrastructure for R&D in process technology.

41. Support for value addition to ASM mineral products, mostly gold and gemstones, has also traditionally been weak. However, this is slowly improving. Ghana, for example, has instituted a precious minerals marketing cooperation responsible for jewellery manufacturing and marketing. Similarly, there has been an increase in lapidaries serving the ASM sector in other African countries like Namibia, South Africa, the United Republic of Tanzania and Zambia.

42. Generally, in the review of policies, beneficiation and value addition has been increasingly emphasized at all levels including the national, subregional and regional levels. Examples include subregional harmonization efforts in the ECOWAS, UEMOA and SADC regions, as well as the AMP and African Mining Vision, at the pan-African level.

43. *Artisanal and small-scale mining (ASM)* - ASM is an integral part of rural Africa. The number of artisanal and small-scale miners is very large, the skills and finances limited, and the operations technologically deficient. The result is often

catastrophic in economic, social, environmental and health terms. The sector has seen varied progress in the last few years with several countries, notably Namibia and South Africa, providing a range of support facilities through ASM technology centres. At the **regional level**, the Yaoundé Vision on Artisanal and Small-scale Mining, which seeks to sustainably reduce poverty and improve livelihoods in African ASM communities by the year 2015 (in line with the Millennium Development Goals), continues to provide guidelines for the development of this subsector. ASM has also been facilitated by the formation of Communities and Small-Scale Mining (CASM)-Africa. CASM currently has three regional networks in Africa, Asia and China and five projects on women empowerment, artisanal gold mining, conflict diamonds, promotion of alternative livelihoods and institutional capacity building. CASM-Africa has adopted the Yaoundé Vision.

44. Building human and institutional capacities - The last decade has seen an increase in technical assistance by development partners to support mining reform in many African countries such as the DRC, Ghana, Liberia, Mozambique, Nigeria, Sierra Leone, the United Republic of Tanzania and Zambia. In addition to policy-making support, assistance programmes have included support for environmental programmes and management support, such as the training of regulators on computerized licensing management systems (mining cadastres). Retention of professional staff in government ministries is, however, a continuing problem and exacerbates existing weak capacities.

45. There has been an increase in programmes to address the challenges (technical, economic, social, and environmental) associated with the ASM sector. Partly, this is in response to its potential role in poverty alleviation and the need to integrate it into broad stream economic development activities. Namibia and Zambia have benefited in this regard, while the United Republic of Tanzania and Zimbabwe are signatories to the Global Mercury Project (GMP). This is an initiative of the United Nations in collaboration with governments and non-government organizations. It aims to promote knowledge and capacity-building on the links between small-scale gold mining practices and health, ecosystems, and social factors, and to implement interventions that reduce mercury pollution and exposure caused by mining activities.

5. Challenges and constraints in meeting commitments

46. The mining sector in Africa, despite the good progress outlined above, is still faced with a number of challenges that hinder the sustainable development of the sector and, in turn, prevent the realization of fuller socio-economic benefits from it. Some of the challenges are outlined below.

47. Effective and transparent regulatory framework - Despite improvements in the regulatory frameworks, African mineral regimes are yet to contribute to the creation of equitable and sustainable mineral wealth from the viewpoint of a diversified mining

industry, which is integrated into the local and regional economy through optimized linkages, and which does not compromise other forms of land use, environmental, social and cultural considerations. The ineffectiveness of regulatory regimes largely stems from incapacities in monitoring compliance with legislative requirements, especially in technical and business reporting requirements, and in environmental and social management plans. Capacity problems extend to ASM operations whose regimes are inadequate and as such do not facilitate a sustainable and vibrant ASM sector. At the *subregional level*, the pace of harmonizing mineral regimes with the RECs, especially in critical areas such as fiscal provisions, remains slow.

48. *Transparency and accountability* - The existing fiscal instruments do not optimize the collection of resource rents, such as windfall and additional profit taxes, while negotiating these with major mining continues to pose transparency challenges. At the same time there have been challenges in efficiently using resource rents to ensure long-term economic development and inter-generational equity. Furthermore, governance systems are not effective in addressing rent-seeking tendencies and corruption, and cannot thus entrench transparency and accountability.

49. The KPCS has been inadequately implemented while there is a clear need to establish similar systems for high value minerals, such as coltan and gold, emanating from conflict zones. This is not, however, achievable without real control over production areas in conflict zones. Popularizing and broadening the adoption and application of international standards, conventions and toolkits resulting from initiatives like KPCS, EITI, EITI++, International Council on Mining and Metals (ICMM), is also a challenge that needs to be addressed. While the voluntary nature of these initiatives is recognized as a systemic weakness, the grounding of these and other CSR initiatives in policy and legislation has its own challenges. These include the weak capacities of stakeholder institutions, which need to provide checks and balances, such as NGOs, community-based organizations (CBOs), and parliament. Furthermore, not all aspects of CSR are amenable to legislation.

50. *Broad-based participation* - There is inconsistency in the existence and/or application of instruments and systems to ensure the effective participation of impacted communities and other stakeholders in mining operations. In addition, there exists a dearth of venture capital sources for African entrepreneurs to enter the mineral sector. The risky nature of exploration and small-scale mining activities does not lend these operations to raising financial resources from formal financial institutions.

51. *Environment, economic, health, social impacts and benefits* - Implementation of provisions for both social and environmental rehabilitation funds provisions embedded in legislation presents capacity challenges to Governments. Similarly, capacity constraints prevent the full participation of communities in negotiating long term benefits from mining companies. While the concept is acceptable that mining communities should benefit from operations in their neighbourhood, minerals are

considered to be national patrimony and are for the benefit of the citizenry. Balancing and managing conflicting local, subnational and national level concerns and interests, including deciding what form the allocation should take to promote growth and development in a particular area is therefore a challenge. Mining can also create conflict between communities and mining companies, or between small-scale miners and large mining companies, or even between government and other stakeholders. Mechanisms to identify and settle mineral-related conflicts and disputes, including addressing social, economic and religious concerns, are lacking. These need to be developed and seen to be applied fairly.

52. Value addition, R&D and technological information - Creating direct and indirect linkages with the rest of the economy remains elusive. Direct up-, down-, and side-stream linkages into mining inputs, beneficiation and human as well as physical infrastructure are needed. There is need to explore the viability of establishing dedicated mineral development funds to assure sustainability through investment into human resource development, research and development, and technology development. It is also necessary to establish indirect linkages by maximizing the use of mineral infrastructure (transport, power and water) to catalyse growth and development in other sectors such as agriculture, forestry and resource processing. Limited investment in the mining sector has led to inadequate geo-scientific information due to lack of systematic geo-mapping. Clearly, many of these problems are related to inadequate funding for operations that rely on the public budget.

53. Financial, technical and capacity-building support - Overcoming the large mineral infrastructure financing constraints through public private partnerships and the grouping of infrastructure users to achieve economies of scale via integrated development corridors remains a major challenge. The large sums of money involved in infrastructure projects and lack of capacity for structuring such projects, coupled with unclear regulatory and unremunerative frameworks all make private participation a challenge. This is especially so in the development of sustainable energy, particularly hydroelectric sources, to cater for the increasing demands from the mining sector. .

54. At the *regional* level, there is a lack of resources for the effective functioning of the continental partnerships/initiatives such as the AMP, intergovernmental forums, AUC-ISG, UNCTAD-African Mining Network (UNCTAD-AMN), AfDB-ALSF, and NEPAD-SDP. The region is confronted with difficulties in the establishment of a continental fund for world class transaction advisors for the negotiation of large mineral contracts.

6. Lessons learned and recommendations

55. Despite the accomplishments recounted in this report the legacy of mining in Africa can be improved. Africa's highest potential for short to medium term-growth

and development lies in its generous mineral resource endowment. However, more needs to be done to achieve this. The emergence of resource-demanding players in the commodity market, such as China and India, coupled with increasing concerns for security of long-term supply from Europe and the United States of America, is likely to fuel perceptions of global resource scarcity. This offers Africa distinct opportunities to use its natural resource endowment for sustainable development. Below is a summary of some of the key lessons and actions to be taken.

56. *Effective and transparent regulatory frameworks* - There is now a realization that unless the mining sector is rooted in the long-term development imperatives of the national economy, it will continue to operate as an enclave, divorced from the rest of the national socio-economic aspirations of African countries and their peoples. The African Mining Vision, which is instructive in this context, is consistent with the principles of sustainable development and the integration of the mining sector into Africa's social and economic development trajectory. African countries should explore practical ways in which the absorption of mining into long-term sustainable development principles can be achieved. They must invest in new forward-looking, development-oriented mineral regimes that create equitable and sustainable mineral wealth from a diversified mining industry that is integrated into the local and regional economy.

57. A sustainable development paradigm requires sustainable wealth creation and for mineral dependent economies, this can only come from taxes levied on enterprises dealing in minerals. African fiscal resource regimes should therefore be made more effective in garnering rents from the mineral industry, especially differential windfall rents. Similarly, the skewed mineral development contracts referred to earlier will need to be renegotiated so that they not only reflect a fair return to the investor, but provide development resources for African economies. It is government's responsibility to maximize the retained value of mineral ventures to the national economy through the creation of useful linkages with other economic sectors including employment, manufacturing value added, local purchases and technology transfer.

58. At the ***subregional and regional levels***, the Addis Ababa Declaration on the "Development and Management of Africa's Mineral Resources" calls on the AUC, in collaboration with ECA, AfDB, AMP, the RECs and other stakeholders, to formulate a concrete action plan for the realization of the AMV and use this as a vehicle for achieving the MDGs. The AUC has already adopted phase two of the ISG project which will craft new generation African mineral regimes during the period 2010 to 2012. It is therefore recommended that AUC, ECA, AfDB, AMP, and the RECs create capacity, in terms of both human and financial resources, to ensure that action plans, policy templates, tool kits and other instruments are developed for use in revising African mineral regimes.

59. The new regimes should also improve the pace of harmonization of mineral policies, codes and standards at the subregional levels, given its many benefits stated earlier. Given the lopsided nature of mineral contracts, it is recommended that the AfDB swiftly operationalize the ALSF to strengthen the capacity of African member States to negotiate better mineral contracts. In the short term, the AUC, AfDB and ECA could explore the establishment of a continental fund to provide access to the use of world class transaction advisors to help negotiate large mineral contracts. This probably needs to be done with the participation of RECs and those African mineral economies dependent on mining activities.

60. *Transparency and accountability* - With good transparent governance, the exploitation of mineral resources can foster economic and social growth, and reduce poverty. While transparency and accountability may be desirable, in practice, they are difficult to achieve in Africa. Governance systems in Africa have not yet fully embraced participatory approaches, which harness the collective potential from a diversity of stakeholders. Systems to promote transparency, including EITI and PYP are viewed suspiciously by the executive, especially due to the participation by NGOs and CBOs. There is need to accept the fundamental premise that (Publish what you pay) PWYP and EITI campaigns cannot improve transparency and accountability if they do not include broader national constituencies such as civil society, political parties and the legislature, which all work to improve democratic values, accountability and good governance.

61. Member countries should seriously consider the adoption and application of minerals conventions emanating from the KPCS, EITI, EITI++ as well as other systems such as ICM toolkits and codes for hazardous substances (mercury and cyanide). A useful way to improve transparency and accountability is to develop a think tank approach, which includes politicians, NGOs and academics, to address issues raised by stakeholders, including the State, communities and mining companies. This has a far greater developmental role. This approach, however, entails necessarily strengthening the capacities of CBOs and NGOs, as well as those of the legislature, to provide checks and balances to the executive. On their part, it is recommended that African States should ensure efficient use of resource rents in order to secure long-term socio-economic development and inter-generational equity.

62. At the *subregional and regional levels*, it is recommended that the AUC-AMP, in collaboration with RECs, should ensure the effective implementation of KPCS in member countries and that other similar systems for coltan and gold are established to address the issue of high-value minerals emanating from conflict zones.

63. *Governance and public participation* - Governance systems need to be rooted in broader participation by communities in mining decisions that affect them and CSR cannot continue to be exercised in a wholly discretionary manner. CSR and governance systems should therefore be embedded in policy and legislative provisions,

where possible. Examples from South Africa, which has a strong governance tradition, as part of the Social Charter, are instructive. The Charter also has a strong component on the participation of nationals in the ownership and management of mineral assets as part of BEE.

64. The above lessons should be broadened to other African mineral regimes. Countries should establish and strengthen legislative instruments and systems to ensure the effective participation of impacted communities and other stakeholders in decisions that affect them. Such instruments should include provisions for the participation of nationals in mineral ventures. They should also ensure balance in the management of conflicting local, subnational and national concerns and interests, including determining the levels of revenue allocation to promote growth and development in mining areas. The systems should also cater for the identification and amicable settlement of mineral-related conflicts and disputes, including land rights, social, economic and religious concerns.

65. A useful approach is to consider introducing mineral concessions, or other mineral rights allocation system, that emphasize the uplifting of the community and enhanced post-mining economic activity for communities. Such concessions need to be associated with monitoring systems that guarantee environmental and social management plan compliance.

66. At the *subregional and regional* levels, the AfDB, in collaboration with the RECs and their member States, should consider the establishment of mineral venture capital funds to enable African entrepreneurs Jamaat Resource Centres (JRCs) to enter the mineral sector. The high entry costs, created by the nature of risk associated with the mining industry is probably the single largest deterrent to the participation of African nationals in mining activities.

67. *Environmental, economic and health impacts and benefits* - While the incorporation of environmental, and to a lesser extent social, provisions in policy and legislation has been improved, their implementation has not kept pace with such improvements. The main lesson to be learnt therefore is that good legislative provisions are not a sufficient basis unless the will and capacity to implement them exist.

68. Member countries are therefore urged to ensure that ESIA's are mandatory and part of legislations, mineral concessions or mineral development agreements, and that they include obligatory social and environmental remediation funds. To this end, social and environmental funds should include physical deposits, bonds and insurance schemes to ensure that when a mine goes bankrupt, its responsibilities are not externalized to hapless communities. Governments, on their part, should allocate resources to create capacity to audit and monitor environmental and social commitments. Mining companies too should realize that environmental and social responsibility is in their long term commercial interests.

69. There needs to be broader scrutiny of mining contracts by stakeholders to ensure that their interests are protected. This applies also to the distribution of mineral revenues between local and national governments, there needs to be greater transparency and fairness so that mining communities, which are at the frontline of mining operations, do not entirely lose out.

70. While taxes need to permit a fair return to the investor, which is consistent with the risk profile of the investment, taxes need to be prudently used to maximize the retained value to the national economy through the creation of useful linkages with other sectors of the economy including employment, value added, local purchases, and technology transfer.

71. Mines are generally located in rural areas with limited or no infrastructure. This substantially escalates project costs and may curtail mine development in some cases. Therefore, infrastructural costs should be shared with other economic activities. This is the approach to the so-called integrated infrastructural development corridors, or spatial development initiatives. The main recommendation is that RECs should, with support from ECA, United Nations agencies and AfDB, and coordination with the AUC, establish capacity for resource-based development corridors that optimize the collateral use of mineral infrastructure (transport, power and water) to establish economic activity in other sectors, such as agriculture, forestry and resource processing. Such corridors would assist in overcoming the large mineral infrastructure financing constraints through PPPs and the grouping of infrastructure users to maximize economies of scale.

72. Probably, the most acute of infrastructural problems is cheap and sustainable hydroelectric energy, with most African regions currently in deficit. Currently, the NEPAD Short-term Action Plan (STAP), in which the AUC, ECA, other United Nations agencies and AfDB are participating, attempts to harness Africa's vast hydroelectric power potential (e.g. Congo River Basin) through various sub-continental projects. While in theory, NEPAD STAP should address the increasing demand from the mining sector, actual progress on the ground is very slow. A major recommendation therefore is for the continental bodies to speed up the implementation of the NEPAD STAP projects.

73. *Value addition, research and development, technological information*

- Most African governments desire to create manufacturing value added from their mineral products. However, value creation has eluded more or less the entire continent despite provisions included in policy frameworks for creating value added to mineral products. Policy needs to be backed by legislation, specific incentives and above all institutional capacity to do this. It is recommended that investment is made into appropriate knowledge-creating capacities including, human resources and research infrastructure and innovation systems to support the creation of value. For this purpose, mineral development funds (from mineral revenues) should be established

to ensure sustainability through investment into human resource development, R&D and technology development. A good example of this is the Innovation Fund in South Africa.

74. In addition, resources need to be identified to broaden geo-knowledge through greater systematic mapping to fully define Africa's mineral assets. While this is a national responsibility, the AU, RECs, Africa's development and finance institutions and member countries could team up with development partners to prioritize the systematic geological mapping of the continent in order to realize the continent's mineral endowment.

75. The artisanal and small-scale mining subsector continues to face challenges related to deficiencies in skills, finance, marketing and technology, among others. Ironically, while much is known about best practice in ASM⁶, practical interventions remain woefully short. The key lesson is therefore that progress is not possible unless such best practice convert into practical on-the-ground efforts to step up assistance programmes to bring ASM into the realm of productive, functioning businesses. ASM also needs to be rooted in localized development strategies, within the realm of overall national development goals. Member countries are therefore encouraged to put in place ASM regimes and assistance programmes that facilitate maximization of the contribution of the sector to rural development strategies and poverty alleviation in an environmentally sustainable manner.

76. *Financial, technical and capacity-building support* - While donor support is crucial to building up institutional capacities, such support is not sustainable in the long term. This is indeed a recurring lesson in Africa. African governments need to build sustainable internal capacities through both training and retention of professional staff in government ministries. Capacity-building is an area where partnerships provide the most sustainable leverage and can take several forms, including training, exchange of experiences, identification and dissemination of best practices, and creation of an appropriate knowledge base on mineral resource management.

77. Other than building the management capacities of government departments, a number of areas, highlighted in this summary, require capacity-building interventions from external partners. These include: regional cooperation for geo-mapping; donor support for resource development corridors, especially in respect of power projects; capacity support for negotiating large mineral infrastructure financing projects; capacities to boost environmental and social management practice; and assistance to small-scale mining ventures to promote sustainable and commercially vibrant mining practices.

7. Conclusions

6 See for example, ECA, A compendium of Best Practice, December 2002

78. Africa has made improvements in creating a vibrant and a diversified mineral sector. However, these improvements have not been sufficient to secure a sustainable sector that is socially and economically integrated into the long-term development aspirations of its peoples. This review has identified and articulated preconditions necessary for the mining sector to make a telling contribution to the sustainable growth and development of the continent, and to the reduction of poverty as envisaged by the MDGs.