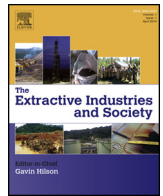




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Viewpoint

Reflections on the opportunities for mining companies to contribute to the United Nations Sustainable Development Goals in sub-Saharan Africa

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ABSTRACT

The United Nations Sustainable Development Goals (SDGs) set targets for all nations in the most important areas of human development, as well as environmental protection and climate change for the period 2015–2030. This viewpoint discusses how mining companies can contribute to the implementation of SDGs through developing region-specific approaches to sustainable development. It argues that investment and cross-sector collaboration for the provision of collective goods such as health, education and infrastructure should be the main focus of the sustainable development policies of the mining companies operating in developing countries. We believe that academics and practitioners could further develop indicators to measure the progress of industry towards the SDGs and devise innovative solutions that link these to mining sector operations. Further research into mineral production at the national level can extend the understanding about the implications of sustainable development for mineral commodities, mines and mineral enterprises.

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1. Introduction and background

The aim of this viewpoint is to reflect on how mining companies operating in sub-Saharan Africa can maximise their contribution towards the implementation of the United Nations Sustainable Development Goals (SDGs). Focusing on the release of the recent white paper, *Mapping Mining to the Sustainable Development Goals: An Atlas* (UNDP, 2016a), which emphasizes a sector-specific approach to development, we aim to further this discussion by adding a further region-specific dimension to drawing sustainable development strategies in the mining sector. First, the viewpoint discusses three major approaches to sustainable development adopted by the mining industry and three main priority areas for maximising the sector's contribution towards the SDGs. It then develops a series of recommendations for further research and practitioner action. We utilise data from the World Bank Development Indicators Databank (World Bank, 2016a) and the Africa Power Mining Projects Database (World Bank, 2016b) in

order to provide an overview of the mining industry in the region and illustrate the magnitude of the challenges ahead if the SDGs are to be achieved.

In 2015 the UN Sustainable Development Summit, building on the legacy of the UN Millennium Development Goals, agreed upon a new set of 17 SDGs to be achieved by 2030 (UN, 2016). Officially launched on 1 January 2016, these goals aim to reduce poverty, hunger and inequalities by improving health, well-being, education, gender equality, work conditions, economic growth, peace, justice, institutions and partnerships, and, by increasing the availability of clean water, improving sanitation, and providing affordable and green energy. The goals relate to themes of industry, innovation and infrastructure, sustainable cities and communities, responsible consumption and production, climate action, as well as life below water and on land. Though the SDGs focus on national level development priorities requiring country-based leadership, business and industry are encouraged to contribute to the fulfillment of these goals through partnerships, private investment and market-based solutions (SDG Fund, 2015). Indeed, multi-stakeholder partnerships and collaborations, where public and private parties mobilise and share resources, expertise and technology, are seen as a solution to complex challenges. The public, private and not-for-profit sectors are encouraged to set

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Table 1

Sustainable development goals and selected indicators for sub-Saharan countries.

#	Countries	SDG1	SDG2	SDG3	SDG4	SDG5	SDG6	SDG7	SDG8	SDG9	SDG10	SDG11	SDG12	SDG13	SDG14	SDG15	SDG16	SDG17
1	Angola	30.1	29.2	477.0	28.9	3.0	28.2	6.0	6.8	..	..	55.5	..	..	0.1	8.3	2.5	21.3
2	Benin	53.1	34.0	405.0	54.4	3.5	72.1	14.5	1.0	24.9	3.0	61.5	3.5	..	0.0	0.2	3.5	5.3
3	Botswana	18.2	31.4	129.0	83.9	..	92.3	23.9	18.2	33.4	..	..	..	3.0	0.0	1.4	..	18.5
4	Burkina Faso	55.3	35.1	371.0	30.3	3.5	75.8	1.4	3.1	21.9	3.0	65.8	4.0	..	0.0	0.3	3.5	9.4
5	Burundi	77.7	57.5	712.0	37.9	4.0	73.8	1.2	6.9	16.7	3.0	57.9	3.0	3.3	0.0	0.3	2.0	1.4
6	Cameroon	29.3	32.6	596.0	56.4	3.0	52.7	18.5	4.3	27.8	3.0	37.8	3.0	..	6.8	12.5	2.5	11.0
7	Central African Rep.	66.3	40.7	882.0	17.4	2.5	54.4	8.2	7.4	13.7	2.0	93.3	2.5	..	0.0	1.5	2.5	4.0
8	Chad	38.4	38.7	856.0	22.4	2.5	44.8	3.1	7.0	14.2	3.0	88.2	2.5	..	0.0	2.2	2.0	2.5
9	Congo, Dem. Rep.	77.2	42.6	693.0	43.5	2.5	31.2	5.8	8.0	32.5	2.5	74.8	3.0	..	4.3	19.9	2.0	3.0
10	Congo, Rep.	28.7	25.0	442.0	54.5	3.0	40.0	11.7	6.5	54.7	2.5	46.9	3.0	..	33.6	3.6	2.0	7.1
11	Cote d'Ivoire	29.0	29.6	645.0	40.1	3.0	68.8	29.0	4.0	21.5	2.5	56.0	3.0	2.5	2.1	3.4	3.0	14.6
12	Djibouti	18.3	33.5	229.0	46.4	3.0	64.7	13.0	..	..	3.0	65.6	2.5	..	0.2	0.5	2.5	10.7
13	Equatorial Guinea	..	26.2	342.0	..	..	31.5	43.0	7.9	..	..	66.2	..	..	2.7	1.5	..	18.9
14	Eritrea	..	50.3	501.0	35.5	3.0	53.3	12.0	7.2	..	2.0	..	2.0	..	0.0	0.8	2.0	1.0
15	Ethiopia	33.5	40.4	353.0	36.2	3.0	48.6	7.6	5.2	16.3	3.5	73.9	4.0	..	0.0	8.4	3.0	2.9
16	Gabon	..	17.5	291.0	..	..	66.7	44.9	19.7	52.8	..	37.0	..	..	9.3	3.0	..	9.8
17	Gambia	..	25.0	706.0	57.5	3.5	84.4	25.7	7.0	..	2.5	34.8	3.5	..	1.2	0.1	2.0	15.6
18	Ghana	..	18.8	319.0	67.1	4.0	84.0	41.0	2.4	26.3	4.0	37.9	4.0	3.3	1.7	1.9	4.0	18.9
19	Guinea	35.3	35.8	679.0	38.8	3.0	67.4	2.9	1.8	37.0	3.0	43.3	3.5	..	4.2	2.3	2.5	1.7
20	Guinea-Bissau	67.1	27.6	549.0	..	2.0	60.3	21.5	6.9	..	2.0	82.3	2.5	1.0	45.9	0.6	2.0	3.3
21	Kenya	..	26.0	510.0	67.6	3.5	56.8	6.7	9.2	19.5	3.5	56.0	3.5	4.0	10.0	8.8	3.0	43.4
22	Lesotho	59.7	33.2	487.0	52.2	4.0	77.0	10.2	26.2	..	3.0	50.8	3.5	2.5	0.0	0.3	3.5	11.0
23	Liberia	68.6	32.1	725.0	37.9	3.0	62.6	1.2	3.8	..	2.5	65.7	3.0	..	2.0	2.6	3.0	5.4
24	Madagascar	81.8	49.2	353.0	38.4	4.0	35.3	8.1	3.6	18.1	2.5	77.2	3.0	3.8	3.4	29.2	2.0	3.7
25	Malawi	70.9	42.4	634.0	39.5	3.5	89.1	2.0	7.5	16.2	3.5	66.7	3.5	1.8	0.0	3.5	2.5	5.8
26	Mali	49.3	35.8	587.0	43.5	2.5	64.1	11.9	8.1	19.3	3.0	56.3	4.0	..	0.0	1.5	3.0	7.0
27	Mauritania	10.9	22.0	602.0	29.9	3.5	57.1	4.4	31.0	..	3.0	79.9	3.0	..	32.3	1.3	2.5	10.7
28	Mozambique	68.7	42.1	489.0	24.5	3.5	37.0	5.4	22.6	20.1	3.0	80.3	3.5	4.0	18.0	7.2	3.0	5.9
29	Namibia	22.6	23.1	265.0	64.8	..	84.6	17.4	18.6	30.4	..	33.2	..	..	28.1	5.2	..	14.8
30	Niger	50.3	43.0	553.0	18.8	2.5	48.6	5.2	5.1	17.6	3.0	70.1	3.5	..	0.0	0.9	3.0	2.0
31	Nigeria	53.5	32.9	814.0	43.8	3.0	57.3	34.4	7.5	20.4	4.0	50.2	3.5	4.0	0.2	6.0	3.0	42.7
32	Rwanda	60.3	44.3	290.0	40.2	4.5	71.9	7.7	0.6	14.2	4.0	53.2	4.0	..	0.0	0.9	3.5	10.6
33	Senegal	38.0	19.4	315.0	40.1	3.5	67.3	26.6	10.0	23.6	3.0	39.4	3.5	2.8	14.4	1.0	3.5	17.7
34	Sierra Leone	52.3	37.9	1,360.0	43.4	3.0	47.8	1.2	3.3	7.6	3.5	75.6	3.5	3.0	7.8	1.3	3.0	2.1
35	Somalia	..	25.3	732.0	..	..	..	17.3	6.9	..	..	73.6	..	..	0.0	6.1	..	1.6
36	South Africa	16.6	23.9	138.0	98.2	..	81.4	66.9	25.1	28.7	..	23.0	..	..	13.4	20.7	..	49.0
37	South Sudan	..	31.1	789.0	..	2.5	56.9	3.5	..	..	1.5	95.6	2.0	..	0.0	..	2.0	15.9
38	Sudan	14.9	38.2	311.0	40.2	2.5	..	17.8	14.8	20.5	2.5	91.6	2.0	..	0.0	5.1	1.5	24.6
39	Swaziland	42.0	31.0	389.0	63.0	..	68.9	24.5	22.3	44.2	..	32.7	..	..	0.0	0.1	..	27.1
40	Tanzania	46.6	34.8	398.0	32.3	3.5	45.5	3.6	3.1	25.9	4.0	50.7	3.0	3.5	18.2	14.8	3.0	4.9
41	Togo	54.2	27.5	368.0	54.7	3.0	44.2	8.9	6.9	17.6	3.0	51.2	3.5	..	2.8	0.3	2.5	5.7
42	Uganda	33.2	33.7	343.0	27.6	3.5	75.8	8.1	3.8	20.4	3.5	53.6	3.5	..	0.0	2.8	2.0	17.7
43	Zambia	64.4	40.0	224.0	..	3.0	51.3	5.8	13.3	33.9	2.5	54.0	3.5	3.8	0.0	3.8	3.0	17.3
44	Zimbabwe	..	27.6	443.0	46.7	4.0	67.3	16.1	5.4	28.5	2.5	25.1	3.5	..	0.0	1.9	1.5	19.9

SDG1 No Poverty. Target – Eliminate poverty measured as income of \$1.25 a day. Indicator – Poverty headcount ratio at \$1.90 a day (PPP 2011) (% of population) 2011 data. Poverty data mostly for 2011. Some individual figures with a sign are for different years, but not earlier than 2006.

SDG2 No Hunger. Target – By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons. Indicator – Prevalence of stunting, height for age (% of children under 5) – 2014 data. Some figures are later or earlier than 2014, but not earlier than 2006.

SDG3 Good health and well-being. Target – By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births. Indicator – Maternal mortality ratio (modelled estimated for 100,000 live births) 2015 data.

SDG4 Quality education. Target – By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes. Indicator – Gross enrolment ratio, secondary, both sexes, %, 2014 data. Gross enrolment ratio, secondary, both sexes (%) data for 2014. Some figures are later or earlier than 2014, but not earlier than 2007.

SDG5 Gender equality. Target – End all forms of discrimination against all women and girls everywhere. Indicator – Country Policy and Institutional Assessment (CPIA) Gender equality rating (1 = low, 6 = high) – 2015 data. Data for Angola is for 2013.

SDG6 Clean water and sanitation. Target – By 2030, achieve universal and equitable access to safe and affordable drinking water for all. Indicator – Improved water source rural (% of rural population with access) 2015 data.

SDG7 Affordable and clean energy. Target – By 2030, ensure universal access to affordable, reliable and modern energy services. Indicator – Access to electricity, rural (% of rural population) 2012 data.

SDG8 Decent work and economic growth. Target – By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value. Indicator – Unemployment, total (% of labour force) (modelled ILO estimates) 2014 data.

SDG9 Industry, innovation and infrastructure. Target – Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries. Indicator – Industry, value added (% of GDP) 2015 data.

SDG10 Reduced inequalities. Target – Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality. Indicator – CPIA social protection rating (1 = low to 6 = high) 2015 data.

SDG11 Sustainable cities and communities. By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums. Population living in slums (% of urban population) 2014 data.

SDG12 Responsible consumption and production. Target – By 2030, achieve the sustainable management and efficient use of natural resources. Indicator – CPIA Policy and institutions for environmental sustainability rating (1 = low to 6 = high) 2015 data.

SDG13 Climate action. Target – Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. Indicator – Disaster risk reduction progress score (1 = low to 5 = high) 2011 data.

SDG14 Life below water. Target – By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information. Indicator – Marine protected areas (% of territorial waters) 2014 data.

SDG15 Life on land. Target – By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular

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