

Budget Document No. 2



MALAWI GOVERNMENT

ANNUAL ECONOMIC REPORT 2015

Ministry of Finance, Economic Planning and Development

**TABLE 2.1: GDP BY ACTIVITY AT CONSTANT PRICES,
(IN MK' MILLION)**

Sector	Constant 2010 Prices (in K'million)				
	2012	2013	2014	2015*	2016*
Agriculture, forestry and fishing	326 761	347 179	368 910	389 013	412 397
Mining and quarrying	11 240	12 021	11 467	11 695	12 067
Manufacturing	104 303	110 096	116 921	123 891	132
Electricity, gas and water supply	14 331	15 118	15 624	16 186	16 990
Construction	32 344	32 980	34 986	36 834	38 558
Wholesale and retail trade	169 568	182 885	193 304	203 606	219 217
Transportation and storage	29 591	31 168	32 861	34 938	36 726
Accommodation and food services	20 989	22 065	23 397	24 124	25 298
Information and communication	42 150	45 292	50 343	53 603	56 762
Financial and insurance services	56 060	58 171	60 103	64 131	69 021
Real estate activities	90 735	92 962	94 462	96 607	99 366
Professional and support services	3 245	3 422	3 605	3 828	3 996
Public administration and defense	22 254	22 854	24 017	25 530	27 084
Education	28 127	29 651	31 706	33 780	35 901
Health and social work activities	29 424	30 911	32 557	34 556	36 729
Other Services	53 288	56 225	59 282	62 769	67 065
GDP at constant market prices	1 091 543	1 159 845	1 229 714	1 296 312	1 380 883
GDP at current prices	1 425 230	1 927 840	2 529 951	3 106 220	3 706 311

Source: National Statistical Office (NSO) and Department of Economic Planning and Development (DEPD)

*Projections

TABLE 2.2: SECTORAL SHARES TO GDP (IN PERCENTAGES)

Sector	Constant 2010 prices (in K'million)				
	2012	2013	2014	2015*	2016*
Agriculture, forestry and fishing	29.9	29.9	30.0	30.0	29.9
Mining and quarrying	1.0	1.0	0.9	0.9	0.9
Manufacturing	9.6	9.5	9.5	9.6	9.6
Electricity, gas and water supply	1.3	1.3	1.3	1.2	1.2
Construction	3.0	2.8	2.8	2.8	2.8
Wholesale and retail trade	15.5	15.8	15.7	15.7	15.9
Transportation and storage	2.7	2.7	2.7	2.7	2.7
Accommodation and food services	1.9	1.9	1.9	1.9	1.8
Information and communication	3.9	3.9	4.1	4.1	4.1
Financial and insurance services	5.1	5.0	4.9	4.9	5.0
Real estate activities	8.3	8.0	7.7	7.4	7.2
Professional and support services	0.3	0.3	0.3	0.3	0.3
Public administration and defense	2.0	2.0	2.0	2.0	2.0
Education	2.6	2.6	2.6	2.6	2.6
Health and social work activities	2.7	2.7	2.6	2.7	2.7
Other Services	4.9	4.8	4.8	4.8	4.8

Source: National Statistical Office (NSO) and Department of Economic Planning and Development (DEPD)

Table 2.3: ANNUAL PERCENTAGE GROWTH RATES, (IN PERCENTAGES)*Constant 2010 prices (in K'million)*

Sector	2012	2013	2014	2015*	2016*
Agriculture, forestry and fishing	-0.7	6.2	6.3	5.4	6.0
Mining and quarrying	14.9	6.9	-4.6	2.0	3.2
Manufacturing	-1.1	5.6	6.2	6.0	7.1
Electricity, gas and water supply	2.4	5.5	3.4	3.6	5.0
Construction	2.5	2.0	6.1	5.3	4.7
Wholesale and retail trade	2.2	7.9	5.7	5.3	7.7
Transportation and storage	4.9	5.3	5.4	6.3	5.1
Accommodation and food services	5.2	5.1	6.0	3.1	4.9
Information and communication	6.7	7.5	11.2	6.5	5.9
Financial and insurance services	6.1	3.8	3.3	6.7	7.6
Real estate activities	3.8	2.5	1.6	2.3	2.9
Professional and support services	2.4	5.5	5.3	6.2	4.4
Public administration and defense	4.5	2.7	5.1	6.3	6.1
Education	5.9	5.4	6.9	6.5	6.3
Health and social work activities	4.1	5.1	5.3	6.1	6.3
Other Services	5.6	5.5	5.4	5.9	5.5
GDP at constant market prices	2.1	6.3	6.0	5.4	6.5
GDP at current prices	23.8	35.3	31.2	22.8	19.3

Source: National Statistical Office and Department of Economic Planning and Development (DEPD)

Chapter 6 MINING AND QUARRYING

6.1 Overview

The Mineral sector continued to experience growth in the year 2014/15. Mineral exploration and production also increased as a result of continued demand by the consuming industries, and the export market. Thus, this report reviews the performance of Malawi's mineral sector in terms of mineral production, domestic and export sales, employment opportunities, as well as a synopsis of new mineral exploration and assessment of existing exploration projects which are underway, mineral licenses and mining investment opportunities currently available in the country.

6.2 Mineral Production

Malawi has a number of minerals, ranging from coal, cement, uranium and gemstones, among others. In terms of volumes rock aggregates, coal, cement and agricultural lime prove to be important with production levels of 1.04 million tonnes, 63,673 tonnes, 57,850 tonnes and 20,206 tonnes, respectively, in 2014. For details, Table 6.1 below summarizes the mineral production levels and monetary values realised from the minerals.

TABLE 6.1: MINERAL PRODUCTIONS & MONETARY VALUES

Type	2013 (Actual)		2014 (Actual)		2015 (Projection)	
	Quantity (tonnes)	Value (K'million)	Quantity (tonnes)	Value (K'million)	Quantity (tonnes)	Value (K'million)
Coal	67,024	826.68	63,673	785.35	60,674	885.45
Cement	60,895	42.99	57,850	40.84	67,870	50.74
Agricultural Lime	21,269	207.68	20,206	197.30	27,206	319.00
Other						
Uranium Concentrates	1,347	49,090	1,065	13,800	-	-
Phosphate	11,783	17.34	11,194	16.47	12,184	196.50
Rock aggregate	1,092,808.3	1748.48	1,038,168	1,661.05	1,111,478	1,517.90
Gemstones	116.3	20.40	110	19.38	210	36.40

Source: Department of Mines

Note: - denotes not available

6.2.1 Coal Production

Malawi has over 22 million tonnes of proven coal reserves in a number of coal fields across the country. In general, coal remains one of the most energy mineral mined for industrial use in the country. Coal productions in 2014 declined due to non-availability of fuel for processing and transportation. In 2015, production is projected to increase due to increased demand as there are companies that are venturing into coal fired power production.

The Mchenga, Kaziwiziwi, Malcoal and Eland Coal Mine Companies continued to be the sector's largest producers of coal in Malawi, contributing about 95 percent. The companies have a combined maximum capacity of up to 10,000

metric tonnes of coal production per month. The coal is mainly used for provision of energy for different production processes in the cement, tobacco, textile, brewery, food processing and ethanol industries. Besides, mining the companies have all embarked on expansion projects by continuing with exploration outside their current mining areas so as to increase their respective production capacities and meet the ever growing demand for coal.

6.2.2 Uranium Concentrates Production

The Kayelekera Uranium Mine which was commissioned in 2009 has remained the largest mining investment in the country's mining sector. Despite the economic slowdown that the country was undergoing, production of uranium concentrates kept increasing. The designed capacity of the plant was to produce 3.3 million pounds (1,500 tonnes) of uranium concentrate (yellow cake) per year. The continued decline in the price of uranium, following the Fukushima accident, has forced the company to suspend mining and processing operations in 2014 until price improves. For the past two years, the price of uranium has been below US\$40 per pound.

6.2.3 Agricultural, Calcitic and Hydrated Lime Production

Zalco, Lime-Co and Flouride companies are the largest producers of agriculture, hydrated and calcitic lime in the country with a combined production capacity of up to 3,500 metric tonnes of lime products per month. All the three companies increased their respective production capacity in 2014 as compared to their production in the previous year. Demand for agriculture lime from the tobacco estates, poultry and paint industries remained robust from within the country. Production of hydrated lime was mostly dominated by medium to small scale operators like the Lirangwe Lime Makers Association and Balaka Lime Makers Associations, among others. Most of these operators have increased their production capacity owing to overwhelming support they are getting from One Village One Product programme (OVOP) in terms of monetary and equipment assistance.

6.2.4 Rock Aggregate Production

The production of rock aggregates declined in 2014 due to the slowdown of economic activities in the country which included construction and rehabilitation of roads and a number of infrastructures. In 2015, there are prospects that the production will pick up as the economy is stabilizing. There are more than 20 operating quarries for production of rock aggregate both at commercial and project level. Out of these only 6 are commercial quarries and the rest are project quarries.

6.2.5 Phosphate Production

Apatite deposits suitable for the manufacture of compound phosphate fertilizers are found at Tundulu in Phalombe District. The phosphates are contained in a carbonatite complex and occur as apatite, sovite and apatite carbonatite. Drill

indicated reserves amounting to 2 million tonnes and averaging 17 percent P₂O₅ have been outlined to a depth of 100 metres. There is potential for increasing the ore reserves by investigating the adjacent areas capped by agglomerate. Part of the Tundulu area is being developed by Optichem for phosphate mining to be used in the production of fertilizer.

6.3 Employment Opportunities in the Mining Sector

6.3.1 Employment Levels

Employment levels in the sector declined significantly in 2014. The decline was as a result of reduced production of Quarry Aggregate which employs a large number of people and the suspension of Kayelekera Uranium Mine. It is also worth noting that the sector also employs about 13,500 artisanal and small scale miners scattered across the country. In 2015, there are prospects that there will be some increase in employment due to the increased economic activities.

Out of the total workforce in the sector, women account for only 10-15 percent. However, the number of self-employed people in the mining sector especially small scale operators is over 22,000 though it is generally difficult to get the actual number of artisanal and small scale miners since most of these operate in remote areas and are unregulated. This, therefore, means that the actual production statistics from the sub-sector remains partial and to some extent unaccounted for.

TABLE 6.2: FORMAL EMPLOYMENT IN THE MINING SECTOR BY 2015

<u>Workforce</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Coal	637	606	706
Uranium Mine	703	300	288
Agricultural, Calcitic and Hydrated Lime	1,677	1,593	1,781
Quarry Aggregate production	8,573	8,144	9,016
Cement manufacturing	106	101	145
Gemstones/Mineral Specimens	124	117	201
Ornamental Stones	30	29	33
Terrazzo	57	54	67
Other Industrial Minerals	884	839	723
Exploration activities	177	168	171
Total	12,968	11951	13131

Source: Department of Mines

6.4 Export Sale of Minerals

6.4.1 Export of Minerals

Export of minerals in 2015 by different mine operators continued to be dominated by coal, ornamental/dimension stones and gemstones, as shown in Table 6.3 below. Revenue generated by the Government through the Department of Mines

only between the period July, 2014 to March 2015 amounted to MK1,418,111,267.21 in terms of royalties, licence processing and ground fees.

TABLE 6.3: MINERAL EXPORTS

Type	2013 (Actual)		2014 (Actual)		2015 (Projection)	
	Quantity (tonnes)	Value (K'million)	Quantity (tonnes)	Value (K'million)	Quantity (tonnes)	Value (K'million)
Coal	9,310	103,151	8,845	97,993.45	7,835	107,893.45
Uranium cake	1,347	49,090	500	13,800	-	-
Other						
Dimension stones	387	11,198,125	36,795	10,638,218.75	38,745	11,718,118.00
Rock aggregate	24	162,687.50	23	154,553.13	28	1684,563.15
Gemstones	109	15,409,041.80	104	14,638,589.70	110	17,698,599.70
Rock/Soil samples	100	4,673,240	95.0	4,439,578	98	4,939,678

Source: Department of Mines

Note: - denotes not available

Coal was exported by Eland Coal Mines to Mbeya Cement Company and Gypsum Company in Tanzania. Gemstones continue to be exported to various parts of the world like India, Indonesia, Malaysia, South Africa, China, U.S.A, Italy, UK and other countries. The average price of the minerals vary per individual operator depending on quality or grade of mineral and the respective production costs since the country does not have fixed prices for particular minerals.

6.5 New Mining Operations and Licenses

In 2014/15, Government granted various licenses to prospecting mining companies and individuals as presented in table 6.4 below.

TABLE 6.4: NEW MINING AND PROSPECTING LICENCES ISSUED IN 2014

Type of Licence	Number Issued	Mineral (s)
Small Scale Operators		
Non-Exclusive Prospecting Licence	78	Gemstones, Ornamental stones
Mining Claim Licence	78	Gemstone, Ornamental stones
Reserved Minerals Licence	48	Gemstones, Ornamental stones
Large-Medium Scale Operators		
Exclusive Prospecting Licence	47	Uranium, Heavy mineral sands, Base metals and Platinum Group Metals, Limestone, Gypsum, Iron ore, Glass sands
Mining Licence	11	Quarry aggregate, heavy mineral sands, limestone and Rare earth minerals
Reconnaissance Licence	3	Graphite and rare earth

Source: Department of Mines

6.6 Mining Investment Opportunities

6.6.1 Mineral Potential of the Country

Malawi produces cement, coal, rock aggregates, dolomite, limestone, and some artisanal salt for domestic consumption. Apart from industrial mineral production which services local demand and the Kayelekera Uranium Mine, Malawi's mineral sector is still in its infancy stage. However, there is potential for heavy mineral sands, bauxite, phosphate, uranium and rare earth element deposits. Artisanal and small scale mining activities have grown considerably and are source of livelihood for many families in rural areas.

A regional geochemical drainage reconnaissance survey prior to 1973 showed several anomalies considered to be worthy following up (Table 6.5). Local and international companies are both actively engaged in the exploration for various minerals over Malawi. Potential exploration targets include gold, uranium, platinum group of minerals (PGMs), base metals, nickel and copper, dimension stone, phosphates, heavy mineral sands, graphite, and coal. Government procured Sanders Geophysics Limited (SGL) which is undertaking a countrywide airborne geophysical survey. It is expected that the survey will generate invaluable data that will provide baseline data to potential investors and other interested parties.

TABLE 6.5: KNOWN MINERAL DEPOSITS, RESERVES AND GRADE

DEPOSIT	LOCATION	DELIANATION RESERVES (Million tonnes/grade)
Bauxite	Mulanje	28.8/43.9% Al ₂ O ₃
Uranium	Kayelekera	12.5/0.15% Ur ₃ O ₈
Monazite/ Strontianite	Kangankhunde	11/ 8% Strontianite and 60% REO
Graphite	Katengeza-Dowa	8.0/75.6gm per m ³
Limestone	Malowa Hill-Bwanje	15/4% CaO, 1.2% MgO
	Chenkumbi-Balaka;	
	Chikoa-Livwezi-Kasungu	10/46.1% CaO, 3.5% MgO
Titanium bearing Heavy Mineral Sands	Chipoka	700/5.6% HMS
	Mangochi	680/6.0% HMS
	Halala (Lake Chilwa)	15/6.0% HMS
Vermiculite	Feremu-Mwanza	2.5/4.9% (Med+Fine)
Coal	Mwabvi-Nsanje	4.7/30% ash
	Ngana-Karonga	15/21.2% ash
	Mchenga	5/17% Ash, 0.5% Sulphur and calorific value of 6,800kcal/kg
Phosphate	Tundulu-Phalombe	2.017% P ₂ O ₅
Pyrite	Chisepo-Dowa	34/8% S
	Malingunde-Lilongwe	10/12% S
Glass Sands	Mchinji Dambos	1.6/97% SiO ₂
Dimension Stone	Chitipa, Mzimba, Mangochi, Mchinji, Chitipa	Blue, Black, Green, and Pink Granite
Gemstones	Mzimba, Nsanje, Chitipa, Chikwawa, Rumphu, Ntcheu	Numerous pegmatites and volcanic

Source: Geological Surveys Bulletins and Private Companies Mineral Exploration Reports

6.6.2 Pipeline Projects

A number of international and local companies are actively engaged in mineral exploration and mine development for various minerals. The minerals being sought after include rare earth elements, Niobium, Uranium, Zircon, Tantalite, Limestone and heavy mineral sands.

During the year under review, a number of companies, both local and foreign, have vigorously continued to pursue intensive exploration for different minerals in various parts of the country. The minerals being pursued include heavy mineral sands, platinum group metals (PGMs), base metals, rare earth elements, coal and bauxite, among other minerals. Generally the year 2015 experiences an increase in exploration activities compared to 2014. The major projects in the pipeline include the Kanyika multi-commodity project in Mzimba, Ntcheu and Mangochi cement production by Bwanje Cement Company and Cement Products Limited, respectively. A summary of potential mining projects are presented in Table 6.6.

TABLE 6.6: POTENTIAL MINING PROJECTS

<u>Company</u>	<u>Minerals to be Mined</u>	<u>Site</u>	<u>Country of Origin</u>	<u>Status</u>
Globe Metals & Mining	Niobium, Uranium, Zircon and Tantalite	Kanyika, Mzimba	Australia	Mining Agreement Negotiation
The Bwanje Cement Project (Deco)	Limestone	Ntcheu/Dedza	Malawi	Bankable Feasibility Study
Lynas Corporation	Rare earth elements Balaka	Kangankunde.	Australia	Bankable Feasibility Study
Tengani Titanium Minerals Ltd	Heavy mineral sands	Tengani, Nsanje	Malawi	Bankable Feasibility Study
Cement Products Ltd	Limestone for cement manufacturing	Mangochi	Malawi	Started Production
Mkango Resources limited	Rare Earth Metals	Songwe, Phalombe	Canada	Feasibility Study

Source: Geological Surveys Bulletins and Private Companies Mineral Exploration Reports

During the year 2015, Globe Metals and Mining continued negotiations for a Mining Agreement on the development of the Kanyika Niobium Mine. The Kanyika project is still expected to kick start mining niobium at Kanyika in Mzimba district by the year 2016 and the project is likely to start at a value of around US\$220 million. The company has continued to undertake the feasibility study in order to come up with a bankable project plan. The project with an estimated deposit of around 50 million tonnes of the multi-commodity minerals comprising niobium, tantalum, zircon and uranium could earn Malawi in excess of US\$100 million in foreign currency per annum which could provide a big boost to the country's foreign exchange earnings.