

# Fostering mining sector for economic diversification

BY BILAL DERSO

Broadly speaking, the mining sector could divide into three main sub sectors such as metals and precious minerals mining, coal mining and industrial minerals mining. Mining is being considered as vital for functioning of the society, and it has a considerable value to the domestic economy.

In Ethiopia's economy, which largely dominated by agriculture, the mining sector contributed about two percent of the Gross Domestic Product in the 2016/17 fiscal year and gold has remained the major commodity in comprising 47 million USD of the total 58 million USD revenue.

Ethiopia put in place a policy framework envisions the mineral sector to be the 'backbone' of the industry by 2020-2023, with an increase in the contribution to the GDP from the current two percent to ten percent and a ten-fold upsurge in foreign currency earnings.

Ethiopia is endowed with huge mineral resources and it has a 2,000-year artisanal history which primarily engaged in gold exploration in the alluvial deposits of the south, west and north of the country. Alluvial gold has been mined for over half a century in the mine called Adola in Guji Zone of Oromia State and the country has a considerable gem potential in the North Wollo Zone of Amhara State which enlarges its foreign currency earnings from opal export.

Information obtained from Ministry of Mines, Natural Gas and Petroleum indicated that currently Ethiopia has one operating gold mine, the Lege Dembi Gold Mine in Guji Zone of Oromia State and owned by Midroc Gold Mine Plc. Lege Dembi has an average production capacity of 4.5 tons of gold per year and it is among the largest in Africa in terms of value production. The Company has continued its underground



Gold has remained mining's major exportable commodity

operation in the Lege Dembi Gold Belt and now it possessed the Sakaro gold deposit. Nearby Lege Dembi, there is the state-owned Adola Mine which has been mined over half a century and the Kenticha Mine is expanding its production capacity and comprising the lion's share in Ethiopia's tantalum production.

Mines, Natural Gas and Petroleum Minister Motuma Mekassa stated that Ethiopia has witnessed substantial success in the industrial mining sub sector and attract big local and foreign cement factories including Derba MIDROC and Dangote which significantly contributed in backing the blossoming construction industry apart from enhancing the linkage between the mineral sector and the rest of the economy. Commendable results have also gained in potash sub-sector and the French-based Allana Potash Company is working to reach its annual production to one million metric ton which is expected to boost the mining sector's relation with agriculture through fertilizer provision.

## Challenges and prospects of the mining sector

Despite the mining sector's enormous potential for national economy and results it has brought in generating foreign currency and creating sizable jobs, its performance has been largely remained unsatisfactory due to contraband trade and illegal smuggling of precious metals. Furthermore, domestic companies' participation in the large-scale mining projects is low due to financial constraints they have faced in the capital-intensive exploration phase.

According to World Bank's study, lack of mining technical and vocational education centers, low productivity and land use conflicts are among the major factors artisanal and small-scale mining have been encountered. The study further noted that the linkage between the mining sector and Ethiopian economy is not reached at a desirable level partly due to the small size of the mining industry.

In this respect, the government and other stakeholders' steady effort is essential

to address the sector's shortcomings and enhance the contribution of mining industry to the GDP.

The Minister stated that various policy amendments have been taking place to create a conducive environment for foreign companies and provide them with various incentives including custom fee importation of capital goods. Furthermore, the amount of money large-scale companies is expected to pay after operation (royalty fee) is five percent, among the lowest in African standards.

Concrete efforts have been made to build domestic investors capacity in the view to enhance their participation in the large-scale mining investments and the government has used its five percent ownership in mines to promote industrial policy objectives and supplement tax revenue.

According to Motuma, the government and other pertinent stakeholders' huge engagement to promote Ethiopia's mining potentials has brought about commendable results in encouraging companies with the desired capital and technology to taking part in country's investment opportunities.

Moreover, laudable activities have been made by micro and small-scale enterprises to provide a substantial employment for youth, especially for those leave nearby the mining sites.

Ministry's Public Relations and Communication Director Bacha Fuji said that Ethiopia does have the geological potential for the discovery of new and sizeable mineral deposits and promising areas are identified in the north, west and south of the country and they are geographically extensive compared to many African countries.

Exploration activities in these areas have increased over the last couple of years while they are still at a relatively

modest level. The potash occurrences in the Danakil Depression in Afar State are sizeable and could support large scale production, as evident from Allana Potash's Project, Bacha indicated.

Despite the stated successes, large scale mining projects in Ethiopia is not expanded at a desirable level and the industry is largely dominated by artisanal activities with the significant exceptions in gold and cement.

Ethiopia's mining policy clearly stipulates the industry's development is driven by private sector's investment and recent attempts to privatize state-owned mines lends support to this intention. Experts in the field recommended that the government needs to consider ways to successfully coexisting its activities with the private sector.

The experts suggested that exploration investments should be supplemented by geological researches and a modern and well-functioning mining registry system is essential to attract large scale mining companies to Ethiopia. The government also needs to put a clear policy direction and formulate associated laws and regulations regarding conditions exploration and mining licenses should be granted.

They also called on companies to plan and implement projects that contribute to country's sustainable development and the government to enhance the capacity of local professionals to seize jobs and opportunities that modern exploration and mining projects would offer.

Above all, integrated efforts of all actors in the industry is crucial to enhance mining's contribution to the GDP and foster its relations with agriculture and manufacturing sectors in the bid to accelerate Ethiopia's move to become a middle-income economy, the experts underscored.

# Nation practically shifting towards STEM

BY YARED GEBREMEDEN

In the 21<sup>st</sup> century, scientific and technological innovations have become increasingly important in transforming nations' social, economic and political platforms.

To succeed in this new information-based and highly technological society, engaging students and assisting them to develop their capabilities in science, technology, engineering, and mathematics (STEM) is critical.

It is with this assumption that the government has given prime attention to science disciplines in its curriculum and investing more on this regard.

In line with this and as part of this activity, hence, activities are being done in Addis and in other parts of the nation by the collaborative acts of various stakeholders in the field. Among these, the Science Shared Campus that is found in Addis Ababa is the one.

Kotebe Metropolitan University Science Shared Campus Vice Principal Tibebu Belayneh recalled that the Campus, which was established three years ago by the joint partnership and support of Addis Ababa Education Bureau, Kotebe Metropolitan University and the unreserved support of Mark Gelfand Family Charitable Trust and other donor development organizations.

The Campus began teaching some 90 high performing students in science subjects drawn from schools in Yeka Sub-city. But now, over 282 high performing students drawn from all the 10 sub-cities are attending their education in the Campus, the Vice Principal said.

He further explained that Science Shared Campus is one of the STEM program



Students while practicing at Foka Science and Engineering Center

components which are established with the aim of sharing science experiences to the society by taking into account the practices of developed nations like Himda's experience in Israel.

Tibebu said that the Campus is established to fill the gaps in the instructional process for talented students on Science, Technology, Engineering and Mathematics as these areas were highly neglected in the past. And the establishment of the Campus, according to him, is a response to addressing such a gap in the area. "This activity is part of the social responsibility of the university to give service to the society on science.

Lamrot Shimeles a grade nine student at the Campus said on her part that the education it is offered by the Center at the moment is different from their previous studies. Particularly, as they are studying with top science scoring students from across Addis Ababa have enabled them

share experiences and skills.

She also said that the Campus has different laboratories for subjects like Chemistry, Physics and Biology to practically see the theoretical studies they acquire in their classrooms.

She added "We desire to see such a practice realized in other schools and parts of the nation. And the government, the public and all stakes and development partners should work hand in glove to realize such a progress across the nation."

Mentioning the various science sector transformations that the nation is going through Minister of Science, Technology, Engineering and Mathematics (MoST) Dr. Engineer Getahun Mekuria said that stakeholders at all levels need to be part of the science transformation that the nation is envisioning to realize in all areas of development.

He also said that the Ministry is keen to work closely with various stakes that



are pertinent supporters of Science, Technology, Engineering and Mathematics as this is their mandate to do so.

The Minister also highlighted that there are 93 professional associations and 23 Stakeholders working in close partnership with the Ministry to realize science renaissance and transformation in the nation.

According to the information from the Ministry various grass root level works are being taken in addition to the various high level science and technology advancements that it is carried out to support various sectors with new developments. Part of this grass root level work is the work done at Burayu Gifted and Talented High school which is under construction and similar with other STEM synergy centers.

MoSt and stakes are also preparing curriculum to offer special training to talented and gifted students.

Ministry of Education, Ministry of Science and Technology, Educations Bureaus, Kotebe Science Shared Campus and active partners like Mark Gelfand Charitable trust and the public at large are highly engaging in transforming the STEM's stream to help the nation achieve best in the area.

For this to happen and successfully deliver STEM content and skills for students, a lot of diverse conditions need to be in place These conditions include quality teachers, experiential learning, informal and extracurricular activities, viable social environments that promote STEM resources and materials, including scholarships and funding. All are important, but teacher quality stands at first.

Therefore, the government and the public at large are expected to work together jointly to cope up with the dynamic technological and highly scientific development in the world.