Second Ministerial Forum
on Science, Technology, and Innovation in Africa

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Academy of the Kingdom of Morocco | Rabat, Morocco

Session Name: STI and job creation: What skills are needed in emerging labour markets in the East African Community (EAC) for extractive industries (Oil, Gas and Mining)?

Date: October 16, 2014
Time: 2:00-4:00 PM
Venue: Rabat, Morocco

Session Aim. This session focuses on developing skills for extractive industries: an emerging sector in East Africa. It will hear ideas and proposals from participants and businesses about the needs and the skills gap (scientific, technological, and managerial) in these sectors. It will also discuss available training opportunities at country and regional levels; and how industry could contribute, along the state, in building relevant skills in the sector through PPPs. Participants will include government officials (Ministry in Charge of Planning, Industry, Labour and Education), private sector, academia and development partners.

Background. Extractive industries are major players in the economic landscape of many developing countries, including EAC. The proceeds from mineral, oil, and gas extraction contribute substantially to many public budget, although with a variation from one country to another. In Nigeria, for example, the extractive industry contributes 20% of the country’s GDP and 65% of its budgetary revenues. Mineral sector is emerging in East Africa. The mining sector – although representing just 2.7% of the GDP – is one of the fastest-growing sectors in Tanzania with an average annual growth rate of 12%. Minerals are also becoming an important source of revenue for Rwanda (exports in value terms showed a strong growth of 56% in 2011). Uganda has recently discovered oil; production would commence in 2015 with projected revenues from the sale of petroleum of US $2 billion per annum over the next 25 years. The Kenyan mining sector is small and under developed (just about 1% of the GDP); but in the recent past various mineral deposits have been discovered. Burundi also has considerable untapped potential in the mining sector (e.g. 6% of world nickel reserves).

Their impact on economic diversification and inclusive growth depends on how governments manage the revenues from extractive industries. When allocated effectively and equitably, revenue flows from extractive industries can finance public goods and services such as education and training, health care and infrastructure, all of which ultimately contribute to expanded economic opportunity for host country citizens. However, this type of indirect contribution is not automatic. The mismatch between revenues generated and local benefits is due primarily to issues of governance, transparency, and accountability in funding allocation, as well as weak administrative capacity in some governments. There are also environmental and sustainability challenges that are to be addressed.

Extractive industries are not labour-intensive, and complain about the shortage of skills. Employment is somewhat concentrated in the construction phases of capital projects, but less so during exploration, ongoing operation, and close-down phases. In addition, extractive...
industries can have important negative impacts on jobs elsewhere in the economy\(^1\). The McKinsey Global Institute notes that the mineral sector in Africa makes large contribution to GDP, government revenue, export earnings, but it employs less than 1 percent of Africa’s workforce, even accounting for direct and indirect job effects. Another issue is the skills deficit in the mineral sector. This tends to be exacerbating by the high premium paid to skilled workers in modern extractive sector employment; it could erode the effectiveness of the public sector and other sectors, since there would be an incentive for staffs to leave for more attractive opportunities in the extractive industries.

*Proposed themes for discussion.* The issues could address both the macro; and micro level.

**Macro or state level.**

- **Macroeconomic policies.** How Government can manage mineral revenues to finance social development (e.g. education; and employment intensive sectors)? What are the required capacities and skills to define and implement sound macroeconomic policies? What role for STI?

- **Education and research policies.** How does Government assess training needs for extractive industry and ensure that the training supply meets the needs of the whole economy in quantity and quality (including via regional cooperation and centres of excellence)? How to attract more women in extractive industry-related skills? What are the main challenges?

**Micro or enterprise level.**

- **Fostering productive job creation.** What are the constraints for job creation in extractive industries? What would be the mechanism and required incentive to create more local jobs for both women and men? What role of STI for research and innovation driven job creation?

- **Corporate social responsibility.** How best could extractive industry contribute to skills development – targeting shortage categories such as geologists, petroleum, mining engineers, environmentalists, etc. – not only for their own workforces, but more widely to expand the skills base in the host country? What are the best practices in this regard?

**Moderator:**
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**Panelists.**
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- Florence Tobo Lobe, Rubisadt Foundation, Cameroon (confirmed), tobolobe@yahoo.fr
- Dr. Kevit Desai, CEO and founder, Centurion Systems; and Chairman and founder of the Kenya Linking Industry With Academia (LIWA) (confirmed), kevitdesai@gmail.com

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\(^1\) These effects are often considered manifestations of “Dutch disease” – the ensuing export revenue led to strong real exchange rate appreciation, deterioration in competitiveness in sectors exposed to international competition, and a loss of jobs in these tradeable sectors.