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Local Content Policies in the Oil, Gas, and Mining Sectors – Conference Report

Extractive Industries for Economic Diversification

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I. INTRODUCTION

The World Bank's Oil, Gas, and Mining Policy Unit, Sustainable Development Network, with co-sponsorship from Norwegian Agency for Development Cooperation, the African Petroleum Producers' Association, the Inter-American Development Bank, ExxonMobil Corporation, hosted a conference on ***Local Content Policies in the Oil, Gas, and Mining Sectors*** at the Hilton Danube in Vienna, Austria on September 30 – October 1, 2013. The two-day conference was dedicated to exploring the particular political, economic, and social challenges arising from the use of local content policies in resource rich countries. The event brought together more than 170 senior representatives from government, industry and civil society to discuss how policy makers and industry can work together to support local economic development industries.

Resource-rich developing countries have an opportunity to harness their oil, gas and mining resources for sustained growth. One of the most potent ways to achieve this is to encourage local growth based on increased domestic content, diversifying national economies.

This report provides an overview of the proceedings with a view to distilling some of the initial lessons learned from the conference. It is organized as follows: Section I includes background information on the conference; Section II summarizes the key messages from each session; and Section III draws initial conclusions and suggests possible next steps.

A - Background:

A number of established and nascent petroleum and mineral producing countries have adopted or are considering the adoption of policies aimed to obtain the greatest benefits for their economies from the extraction of these exhaustible resources. One important theme of such policies is the so-called local content created by the sector—the extent to which the output of the extractive industry sector generates further benefits to the economy beyond the direct contribution of its value-added, through its links to other sectors. Government intervention in the petroleum and mining sectors to support broad-based economic growth is hardly a new trend. But the extent and type of intervention has evolved over time from the restrictions on imports, and direct state intervention, to more complex policies aimed at creating *backward links* (that is, supplying input to the local economy through transfer of technology, the generation of value-added in domestic supply sectors, the creation of local employment opportunities, and increasing local ownership and control) and *forward links* (that is,

processing the sector's output prior to export through, for example, the establishment of refineries, petrochemical industry, and the production of fertilizers).

While local content policies have the potential to stimulate broad-based economic development, their application in resource-rich countries has achieved mixed results. The industry is characterized by the use of specialized input, often at the high end of the technology spectrum, sourced through globally integrated supply chains. Consequently, supplier concentration in many industry-related sub-sectors is high, adding further barriers to the development of a local supply sector. Countries with a limited economy would naturally find it difficult to develop a local supply industry at the pace, size, and quality necessary to satisfy the demand from petroleum and mining projects. In these countries, a fast-growing petroleum and mining sector combined with too ambitious local content targets may exacerbate supply bottlenecks arising from increased local demand, negatively impacting employment and output trends in other sectors of the economy, creating inefficiencies, and in some cases even promote corruption. [1]

Although total spending on goods, services, and equipment usually constitutes a significant share of petroleum and mining projects costs, limited local supply chains have developed in petroleum and mineral-rich developing countries.[2] Petroleum and mining operations often take place in remote locations away from domestic manufacturing centers and with limited access to infrastructure and electricity. Restrictive business conditions, such as difficulties in accessing finance, lack of relevant skills, and information asymmetry, typically constrain an efficient supply response from domestic entrepreneurs. As a consequence often, a very high share of the value of goods and services used in petroleum and mining projects are imported, and local content is limited to port handling, transport services and distributorships.[3]

The petroleum and mining industries are generally known for the relative high market concentration, and substantial investment in R&D to reduce costs, improve productivity, and secure technological advantages. Collaboration among petroleum and mining companies, their integrated service providers, and domestic suppliers is therefore critical to the development of a sustainable local industrial capacity. Countries experience shows that the agglomeration of activities can accelerate productivity and efficiency through knowledge spillovers, synergies, better coordination, and efficient

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[1] Local content in the Oil and Gas Sector, World Bank Studies, 2013; and Increasing Local Content by the Mining Industry in West Africa (World Bank, 2012)

[2] For example, annual procurement of supplies by the oil, gas and mining sectors in Sub-Saharan Africa run to the tune of USD40 billion per annum and are on an upward path based on the investment pipeline.

[3] For example, a recent study in Zambia found that the supply of manufactures and services to the mining sector accounted for less than 5 percent of total annual industry spending after discounting the amount spent on power, cement and fuel supplies.

access to public goods. Resource corridors, regional integration, geographic and sectoral clusters, and special economic zones have been used by governments to accelerate the development of competitive local enterprises.

In principle, local sourcing makes good business sense for the extractive industries. Petroleum and mining companies are facing rapid cost escalation and a shrinking pool of skilled labor at technical and managerial levels. Long logistics chains coupled with port and boundary issues are sources of delay and hence cost – import tariffs (or red tape associated with duty waivers) add to concerns. Local sourcing, provided it delivers goods and services reliably that meet requisite standards, helps to contain costs. Relationships with nearby suppliers can also support the companies' social license to operate. Therefore, it is not surprising to note that local content has gone well beyond the traditional corporate social responsibility agenda. In addition, a better-educated workforce has a major impact on productivity and adaptability to new routines and technological change. Overall, by generating more tangible benefits than merely foreign exchange earnings and taxes, local sourcing demonstrates good corporate citizenship by oil, gas and mining companies. Given the foregoing, it is no surprise that companies.

Citizens of resource rich countries are also increasingly focusing on enhancing benefits from extractive industry investments. As such, the number one concern of civil society and communities in EI producing regions is employment, and the government's credibility often rides on its ability to create jobs. Although policies mainly refer to local content without specifying its location within the economy, it is common that the communities closest to—and possibly most affected by—petroleum and mining installations will also exert the most pressure for job creation and development of a domestic private sector. It is also common for companies to agree with the local communities on quotas for employment and skill training.[4] Some companies have introduced the 'local-local' definition to identify suppliers that operate close to the area of operation of the mine or oilfield. Even small gains in the share of local supplies to petroleum and mining projects often represent large opportunities for affected communities. In some cases, pressure from civil society may add to the complexity of designing efficient and sustainable local content policies.

Local content is a complex and rapidly evolving policy area. Policies and regulations differ widely among countries, and at times between oil/gas and mining in the same country. This raises a number of question on the meaning of local content, its extent, the conditions for success, the role of government, industry and civil society, its contribution to economic growth and shared prosperity, and ways in which such contribution could be measured. Panelists and participants addressed these themes.

[4] Community Development Agreement Sourcebook (World Bank, 2012).

B – Organization:

The conference drew on existing and on-going work by industry practitioners, companies, regulators, civil society organizations, the World Bank and other donors on issues related to the design and implementation of local content policies in extractive industries. The conference was structured around the following sessions: 1) Local content policy trends; 2) Definition of Local Content; 3) Industry partnerships to support suppliers' development; 4) Employment and skills development; 5) Enabling the development of industrial capacity: Resource corridors, clusters and SEZs; 6) Local content policies design and implementation issues; and 7) Next steps.

The event also featured two keynote speakers: Aluisio G. de Lima-Campos, Chairman of the ABCI (Brazilian International Trade Scholars) Institute, who prodived a brief overview of the dichotomy between localization and global economies; Ernerst C. Nwapa, Executive Secretary of the Nigerian Content Development and Monitoring Board, who focused on lessons learned from the implementation of local content policies in Nigeria.

Over 170 people participated in the conference, with representation across 50 countries and a variety of organizations including multilateral and bilateral institutions, government agencies, and civil society. Active participation from the audience was central to achieving the objectives of the conference.

II. CONFERENCE PROCEEDINGS

A – Day 1: Opening session

- Ellen Goldstein, Country Director and Regional Coordinator for Southeast Europe and Central Asia, World Bank
- Abdoulaye Kone, Director, Mining, Petroleum, and Renewable Energy, West African Economic and Monetary Union (WAEMU)
- Aidan Davy, Deputy President and Senior Program Director, International Council of Mining and Metals
- Wolfgang Kraus, Senior Associate, IPIECA

In her welcoming remarks Ellen Goldstein stressed the importance of long term sustainable and inclusive growth and the ability of extractive industries to contribute to economic growth by generating further benefits to the domestic economy beyond the direct contribution of its value-added, through productive linkages with other sectors. Indeed a number of established and nascent petroleum and mineral producing countries have adopted or are considering the adoption of so-called local content policies, i.e. policies that aim to support local employment, and the development of a local diversified economy. While these policies have the potential to stimulate broad-based economic development, their application in resource-rich countries has achieved mixed results:

- Countries with a limited economy find it difficult to develop a local supply industry at the pace, size, and quality necessary to satisfy the demand from petroleum and mining projects;
- Domestic suppliers often struggle to find skilled workers, capital, and access to bids on larger contracts offered by oil, gas, and mining projects.
- Civil society and community-based groups may perceive that there is a lack of benefits and jobs.
- Governments have the difficult task of assessing the pros and cons of protecting a nascent industry and designing policies to ensure its competitiveness on the global market.
- Not least, a government's survival often depends on its ability to create jobs.

These are complex challenges with considerable implications on efficiency and long term sustainability. Although each country has its own context, priorities, and strengths, sharing ideas and experiences on the design and implementation of effective local content policies may help to avoid costly mistakes.

These messages were echoed by Abdoulaye Kone, Aidan Davy, and Wolfgang Kraus, who pointed to the need for more structured intervention in order to realize the potential of economic linkages. The regional implication and partnership opportunities of local content policies were highlighted by Mr. Kone. There is no invisible hand behind economic diversification but shared interest and a concerted effort from all stakeholders, noted Aidan Davy stressing the importance of early engagement and collaboration among stakeholders.

A – Day 1, Session 1: Introduction

This session focused on the recent trend towards increased local content requirements and its implications for economic growth, competitiveness, and long term sustainability.

Moderators: Paulo de Sa, Manager, Sustainable Energy Department, Extractive Industries, the World Bank
Abdul Razak Noormahomed, Vice Minister, Ministry of Mineral Resources, Mozambique.

Lead Presentation: Svein Olav Svoldal, Adviser, Department of Economic Development, Equality and Governance, NORAD

Panel:

- Raphael Kaplinsky, Development Policy and Practice, Open University
- Samuel Gayi, Head of the Special Unit on Commodities, UNCTAD
- Lindsey Napier, Private Sector Adviser, Governance and Extractives Team, Africa Regional Department, DFID
- Gabriel Dansou Lokossou, Executive Secretary, Africa Petroleum Producers Association (APPA)
- Natalie Stirling-Sanders, Upstream National Content Manager, ExxonMobil

Svein Olav Svoldal underlined the relevance of extractive industries to a wide range of countries at different stages of development, and the important role that well designed local content policies have played in some of these countries towards the diversification and thickening of the domestic industrial sector. He warned against the practice of borrowing other countries policies without due adaptation to local circumstances. Norway's experience was cited as example of successful local content development leveraging the growth of the petroleum sector as well as an already developed industrial and service economy. Many factors affect policy success, and these need to be taken into account in defining the desired policy outcomes; identifying the economic sectors that would likely be sustainable in the long run; choosing the most efficient and effective policy tools; and estimating the time frame necessary to achieve the desired policy results.

Discussants underlined the need for coherent policies, supported by a strong political will. Consultation with industry was repeatedly cited as means to avoid unrealistic expectations and the unintended consequences of ill designed regulations. The importance of local content diagnostics to identify low investment, short and medium terms opportunities or "low hanging fruits" was also cited.

Lindsey Napier underscored the importance of demand-led priorities, and incentives devised to guide industry's behavior towards the desired policy outcomes.

Natalie Stirling-Sanders stressed the importance of setting clear policy goals and priorities, while maintaining the flexibility to adjust implementation to actual circumstances.

Raphael Kaplinsky echoed this message, and stressed the role of high level government ownership of the overall local content strategy He also noted the need for governments, companies, and the donors' community to move from "taking to action".

Recent comparative analysis carried out by the Making the Most of Commodities Program indicate that fostering innovation and the localization of knowledge intensive processes as opposed to simply encouraging increased local participation is more likely to lead to long term competitiveness and sustainability. These criteria, suggested Professor Raphael Kaplinsky would help to address the difficulties faced by governments in "picking winners".

Industrial and innovation policies have been used in other economic sectors since the early 60s, said Kaplinsky, and lessons can be derived on their successes and failures that are relevant to the commodity sector. For example:

- Policies need to be credible: sanctions help to build credibility.
- Clear policies and strategies and implementation capability must be present at company level too.
- Invention is the easy part of innovation. The difficult task is implementation and the management of innovation.
- It is important to distinguish areas of potential misalignment of interest between industry and government (such as rent sharing, the reluctance of commodity firms to invest in training or other activities that have externalities, and the different time horizon between investors and governments) from the win-win areas.
- Often governments get so focused on rent sharing that they fail to recognize that in a world of core competences and outsourcing, extractive companies have a keen interest in using local supply chains if quality and reliability are assured. This creates the space and scope for collaboration and management of innovation.

Samuel Gayi emphasized the importance of realistic policy objectives, grounded in value chain analysis at national and regional level, and within the reach of the specific countries.

State owned enterprises can be a valuable policy tool to integrate local content into the supply chain.

Gabriel Dansou Lokossou underlined the importance of sustainable growth and shared prosperity for resource-rich countries, now a policy priority for APPA member countries including at regional level.

Managing expectations emerged as one of the most challenging issues for policy makers in resource rich developing countries. Abdul Razak Noormahomed summed up the challenge in a sentence: "Resources are not development but a promise of development".

B – Day 1, Session 2: What is local content?

This session focused on the wide range of definitions of local content across countries and their implications on policy outcomes.

Moderator: Kristina Svensson, Senior Operations Officer, Oil, Gas, and Mining Unit, World Bank

Lead Presentation: Anthony Paul, Principal Consultant, Association of Caribbean Energy Specialists, Ltd.

Panel:

- Rupert Barnard, Group Managing Director, Kaiser Associates Economic Development Practice
- Claudia Viale, Research Associate for Latin America, Revenue Watch Institute
- Raul Gonzales Martinez, Joint Director, General Directorate of Councils and Committees, Deputy Secretary of Hydrocarbons, Mexico
- Evelyn Dietsche, Contractor Advisor, Development Economics, BG Group
- Mercedes Eworo Milam, Advisor, Ministry of Mines, Industry, and Energy, Equatorial Guinea
- Fraser Thompson, Principal Fellow, McKinsey Global Institute

Anthony Paul's presenation focused on the variety of possible meaning of local content. The following examples were cited:

- in country/region value retention;
- value addition (inputs & outputs);
- local employment (more and better jobs; talent export);
- local industrial capacity development (improve the competitiveness and international reach of local firms);
- local capital market development (reinvestment of profits and reduction of cost of capital);
- institutional capacity development (improve sector governance and reduce the cost of good governance);
- national/regional economic sustainability (cross-sector benefits, use of local raw materials and manufactured goods, improved services for businesses and the general public, infrastructure development, access to innovation and technology,

localization of research and development, improve the balance of trade, support regional integration);
- and improve investors' benefits (access to wider talent and services pool, cost reduction, license to operate).

Measures of local content are equally varied:

- value addition;
- share of local ownership;
- control or financing share of local employment; and
- share of sales by local companies are among the most frequently used measures of policy success.

Venezuela and Trinidad and Tobago were cited as interesting example of cross border local content whereby suppliers from either country are considered "local" for the purpose of satisfying local content requirements. This variety makes cross country comparison and monitoring of local content policy implementation a challenging endeavor.

It is commonly believed that the definition of local content affects the policy outcomes. For example, a policy aimed at increasing the share of goods and services produced domestically would differ from one aimed at increasing the share of goods and services produced by companies that are owned or controlled by nationals. Indeed it can be argued that value can be added locally independently of company ownership.

However local content policies are not simply motivated by economic rationale. The desire to generate tangible, short term direct benefits to local constituencies is often a powerful policy driver.

Discussants concurred that there is no correct or incorrect definition of local content On the contrary the definition and monitoring measures reflects the country's specific policy objectives, and need to adapt over time with changes in local conditions and context.

In a recent research carried out by McKinsey Global Institute on 80 resource rich countries, 75 percent of the countries had blanket legislation, said Fraser Thompson. These countries did not target specific sub-sectors but simply mandated a certain percentage of extractive companies' total purchases to be made locally. About 80 percent of these countries were not targeting the right value pools (e.g. some were very small, some were beyond the country's capability, and so on). About 95 percent of the surveyed countries did not state a time frame for policy implementation and targets. In the vast majority of cases no institutional framework was established to support the achievement of policy targets. These findings underline the importance of a clear policy

formulation, as well as adequate implementation metrics and institutional arrangements.

A similar research is being carried out by the Revenue Watch Institute looking at local content legislation and implementation achievements in Latin America, said Claudia Viale.

Discussants underlined the importance of long term thinking in the design and monitoring of results, and noted the important role of state owned enterprises in driving local content development, as well as the need for increased inclusiveness with particular reference to the traditionally disadvantaged portions of the population.

Evelyn Dietsche stressed the relatively new policy shift in resource-rich countries towards increasing the socio-economic benefits of extractives beyond their direct contribution to the economy. This led to the recent focus on definition, methodology and metrics to assess such contribution and to build productive linkages. For extractive companies this shift in policy priorities involves the need to learn how to read public policies, contextualize investments, and interact with a broader set of stakeholders, and for governments it involves the need to interact with companies in the early phases of policy design so that definition and targets are set in a realistic manner.

Mercedes Eworo Milam underlined the evolutionary nature of local content policies, and the role of knowledge sharing with other countries in shaping what local content means, what works and what does not, and why. Until 2006 Equatorial Guinea's definition of local content was limited to local goods and services, training, and employment obligations under petroleum contracts. Local content is now defined to encompass the broader benefit to local economy from the extraction of hydrocarbons.

In Mexico, said Raul Gonzales Martinez, local content is defined in terms of value added, and measures are in place to support supplier's development. PEMEX, the national oil company, is a central piece of the government's local content strategy. The debate has now moved from the definition of local content to the policy approach: Should local content be mandated or encouraged? How can we pick winners? What should the role of the national oil company and that of the regulator be? Is localization compatible with the globalization of the economy?

To enhance benefits from local content there is a need to move beyond the simple categorization of locally registered firms, said Rupert Barnard. Particularly in low-capacity environment there might be an argument to categorize suppliers based on the degree of local participation and of value addition in order to capture the essential elements of a good local content definition, and set the basis for appropriate policy metrics.

C – Day 1, Keynote address: Local content policies and global economies

The apparent dichotomy between increasing local content requirements and trade liberalization was discussed by Aluisio de Lima-Campos, Chairman of the Brazilian International Trade Scholars (ABCI) Institute in his keynote speech. There is a general sense that local content policies without sunset clauses inhibit the supported sector from becoming competitive. But it also generally accepted that nascent industries require some sort of protection to be able to grow and compete. Whether or not local content policies are justified on their own merits, a nontrivial issue is their compliance with multilateral and bilateral trade regulation.

Focusing on multilateral trade agreement under the World Trade Organization (WTO) the most relevant rules with implications for LCPs include the General Agreement on Tariffs and Trade (GATT), the agreement on Trade-Related Investment Measures (TRIMs), the General Agreement on Trade in Services (GATS), and the agreement on Government Procurement (GPA).

The agreement on TRIMs is based on the "national treatment" principle of Article III of the GATT, and pertains to trade in goods. TRIMs applies to all WTO members, and prohibits local content requirements that mandate particular levels of local purchases by an enterprise. The rules also prohibit trade-balancing requirements that restrict the volume or value of imports that an enterprise can purchase to an amount related to the level of products it exports. In essence, the rules require a host country not to discriminate between foreign and national investors insofar as the purchase of products is concerned. Transitional arrangements are in place to allow the phasing out of protectionist measures for new WTO members. Trade in services under GATS has similar provisions to GATT.

Procurement by government agencies for products purchased for governmental purposes and not with a view to commercial resale or with a view to use in the production of goods for commercial sale is subject to the provisions of the GPA. The rules are intended to open up government-transacted business to international competition. Given the relevance of state owned enterprises in the extractive sector, these rules may have a considerable impact on local content policies. However, to date no developing country has signed the GPA.

Of the few cases that have been brought before the WTO, none is specific to local content policies in the extractive industry. However the situation may change given the rising number of stringent local content requirements and the relevance of extractive industries at domestic and global level. Therefore, in designing local content policies, picking winners, and defining local content requirements countries should take into due consideration existing and planned trade agreements.

D – Day 1, Session 3: Industry partnerships to support suppliers' development

This session comprised discussants from petroleum, mining, and service companies and was intended to share knowledge on industry level initiatives to build sustainable local supply chains.

Moderator: Gosia Nowakowska-Miller, Operations Officer, Sustainable Business Advisory, IFC

Lead Presentation: Osvaldo Urzua, Manager, Government and Institutions Relations, BHP Billiton, Chile

Panel:

- Simon Blamires, Supply Chain Manager, Newmont Ahafo Ghana
- Dinah Azare, Local Content Manager, Tullow Oil
- Simbi Wabote, Shell C&P local content manager
- Luiz Pacheco, Vice President, Planning, Pacific Ruviales Corporation, Colombia
- Nils Tcheyan, Director, Government Affairs and Policies, Africa, General Electric
- Pamela Chavez Crooker, CEO, Aguamarina

Osvaldo Urzua's presentation focused on practices and policies commonly used by extractive companies to support, and in some cases, drive the development of a local supply chain. BHP Billiton's approach in Chile is structured around two pillars:

- the development of local technology through suppliers' development programs targeting companies that can compete internationally; and
- the selection of suppliers that are willing to engage in developing new technical/technological solutions.

Chile's experience is indicative of the effectiveness of private sector led initiatives and the natural incentives for extractive companies to localize supplies to the maximum extent possible in a bid to reduce costs and increase competitiveness.

Although BHP Billiton's experience may suggest that government intervention may not be necessary, generalization would not be correct. Indeed market-based inputs cannot replace public inputs in all cases. There are functions that markets cannot perform, such as establishing company registries, setting norms, enforcing contracts and laws, and providing infrastructure. An inadequate supply of these public inputs affects the productivity of market-based activities. Indeed even in Chile the government played the important role of supporting and catalyzing industry collective action. In general, countries that lack the basic infrastructure, have a limited industrial base, and limited skilled workforce would likely require a combination of incentives and mandatory policies.

The economic impact and extent of industry led initiatives also depends on the size and longevity of the project. For a company to spear head the development of local supply chains and human capacity there needs to be a sound economic and financial case, as well as government support and contribution of critical public inputs.

Discussants also underlined the importance of industry partnerships to ensure critical mass for investment, avoid inefficiency associated with overlapping programs, and underpin local development strategies for both governments and industry.

Industry partnership is not limited to companies from the same sector, noted Luiz Pacheco. In Colombia where the company operates water – a by-product of oil production – is being used to ensure the irrigation of vast African palm plantations creating employment opportunities for bordering communities that would otherwise not be affected by the project. This was made possible by actively seeking partnership opportunities along the entire value chain.

Simbi Wabote noted the business sense of local content for investors. Local supply chains reduce cost and improve the security of supplies. Supporting the development of local suppliers is no longer a voluntary or corporate social responsibility issue. A thorough understanding of local capability is the starting point to developing local content strategies. For example – said Wabote – localizing the production of platform may not make sense if the demand for platforms is not sustained. On the other hand, localizing recurrent production services would make business sense.

If industry partnerships and early dialogue with the host government are important for the success of local content policies, the role of internal partnerships should not be underestimated, said Dinah Azare. To this end Tullow Oil has created a local content department tasked with ensuring that every employee buys into the local content principles and works towards shared objectives.

Ghana was cited as interesting example of collaboration among mining companies and the government. Simon Blamires pointed at the natural tendency of mining companies to work in isolation, and noted the positive effects that early cross-company cooperation and government support have had on increasing the manufacturing base and employment pushing the boundary of domestic capacity constraints.

Pamela Chavez Crooker acknowledged the importance to Aguamarina – a domestic technological company operating in Chile – of buyer-supplier partnerships to provide the testing ground for innovations and the potential for scalability to justify R&D investment.

Another example of partnering to build strong domestic supply chains was discussed by Nils Tcheyan. The company's products have a long life span and are used as components in wide range of industries. Strengthening local capacity with a view to

building competent, competitive suppliers is a base principle to ensure the quality of General Electric's products.

E – Day 2, Session 4: Employment and skills development

Extractive industries are capital intensive and employ specialized and high-end technology relative to most other sectors of the economy. This requires an equally specialized and skilled workforce. This session focused on measures to improve the to improve the quality and level of local employment.

Moderator: Mike Morris, Director, Policy Research in International Services and Manufacturing, University of Cape Town

Lead Presentation: Harry Pastuszek, Vice President for Enterprise and Community Development, CDC Development Solutions

Panel:

- Marcelo Mafra, National Petroleum Agency, Brazil
- Antonio Pedro, Director, United Nations Commission for Africa for the Africa Mining Skills Initiative
- Hernan Araneda, Head, Center for Innovation in Human Capital, Chile
- Timothy Melvin, Country Director for Liberia, Building Markets

Harry Pastuszek framed the discussion of alternative approaches to reducing the skill gaps. Estimates of the gaps in specialized workforce suggest a shortfall of about 10-15 percent for technical positions in the extractive industries. This may sound pretty dire for a company that is trying to ensure the right level and mix of skilled workers to undertake its projects worldwide. But it is also an opportunity for frontier and emerging markets where skills gaps are most acute and extractive projects are more relevant to local economy.

Developing skills requires investment and time, and may not be economically viable if viewed in the context of a single project. Available data would seem to indicate that the developed world has been shying away from investment in vocational education and training which has led to a sustainability issue with an aging workforce. While the government has the responsibility to ensure that the workforce has the right level and mix of education and skills, this cannot be done without cooperation with industry.

One of the major challenges in resource rich countries is the sequencing of development of the extractive sector and of other economic sectors. This is critical to properly address the skills gap. But entry barriers for the local workforce may not be overcome simply through the voluntary or mandatory training obligations that usually accompany the

grant of oil, gas, and mining exploration and production rights. Clearly the development of a skilled workforce is a shared responsibility.

The African Mineral Skills Initiative, led by the United Nations' Commission for Africa, is an example of shared engagement in the development of a local skilled workforce. The initiative provides a framework for engaging and mobilizing the stakeholders over a common vision, said Antonio Pedro. Strategies for implementing this vision and concrete implementation measures are critical for its success.

In countries with very limited capacity, concrete implementation may require a bottom up approach. For example in Liberia – said Timothy Melvin – tackling the skills gap involves programs tailored to building local suppliers' capacity to participate in a specific mining project, as well as building awareness of local capabilities and opportunities. In this context asymmetry or lack of information is often a critical hurdle to the development of a skilled local workforce.

In more structured context multi-stakeholders approaches may be possible, and could result in a wide and sustainable footprint. The Mining Skills Strategy in Chile, coordinated by Fundación Chile, is an example of this type of approach. The initiative involves 12 large mining companies that account for 95 percent of copper production in Chile, 30 suppliers, training institutions, and the public sector represented by the Ministry of Labor and the Ministry of Mining. In the past there was no cooperation among large mining companies. Their size allowed them to fend for themselves. But the skills crunch has brought them together to jointly forecast the employment levels by skills necessary to support their projects over the next decade. By comparing these estimates with the projected level and composition of the workforce gaps in tertiary education and the misalignment between existing vocational and training programs and future needs were identified. If unattended – noted Hernan Araneda – these gaps would lead at best to project delays and at worst to project cancellations.

Joining forces not only allowed the companies to have a better appreciation of the employment market and its likely evolution, but also provided the scale to justify public sector investment in education focusing on youth and women, the most promising and underutilized portion of the population in Chile. The alignment of interests between companies and the government, as well as the catalyst role of Fundación Chile were cited among the success factors of this market-led initiative.

Brazil followed a similar approach, spearheaded by the national oil company. Emphasis on localization of research and development – said Marcelo Mafra – was ensured through funding obligations included in petroleum contracts to support the modernization of the education system, and concerted vocational and training programs. Given the scale of investment required to align the employment market to the sector's needs, government intervention and lead and a multi-stakeholders'

approach through structured consultative forums were considered critical for the success of the program.

F – Day 2, Session 5: Enabling the development of industrial capacity: Resource corridors, clusters and SEZs

The petroleum and mining industries are generally known for the relative high market concentration, and substantial investment in R&D to reduce costs, improve productivity, and secure technological advantages. Collaboration among petroleum and mining companies, their integrated service providers, and domestic suppliers is therefore critical to the development of a sustainable local industrial capacity. Countries experience shows that the agglomeration of activities can accelerate productivity and efficiency through knowledge spillovers, synergies, better coordination, and efficient access to public goods. This session discussed experiences with the establishment of resource corridors, regional integration, geographic and sectoral clusters, and special economic zones to accelerate the development of competitive local enterprises.

Moderator: Osmel Manzano, Principal Economist, Inter-American Development Bank

Lead Presentation: Ian Satchwell, Director, International Mining Development Centre

Panel:

- Michael Hackenbruch, Principal Advisor, Urbanpol.
- James Dobbin, President, James Dobbin International/Rio Tinto Guinea and Mozambique
- Alexander Kim, First Deputy Governor of Khanty-Mansiysk, Autonomous Okrug, Russian Federation
- Dmitry Lipyavko, General Director, Blue Line Project Company
- Marcio Senne de Moraes, Corporate Affairs Head for Europe and North America, Vale

Ian Satchwell opened the panel discussion with a review of Australia's experience with clusters, special economic zones and resource corridors.

Clustering has been successfully used to support the development of the Mining Equipment, Technology and Services sector, a knowledge intensive sector that represented about 7 percent of GDP in 2011. This strategy involves much more than the simple sectoral and geographical agglomeration of firms. Critical success factors for Australia's cluster experience include:

- Government support in the form of industry participation policies (partnerships with business to connect customers and suppliers, and support to small business), good business infrastructure, attractive town amenities to entice the relocation of a skilled workforce, and good education and training institutions, was cited among the critical success factors. Market failures with regard to supplier-customer linkages

were tackled by the government through encouraging local content policies (Australian Industry Participation National Framework) and public-private partnerships (e.g. the Industry Capability Network and Project Connect).

- A diverse, deep and long life customer base, the existence of market leaders/large firms, access to innovation and R&D, industry cooperation on large or multidisciplinary contracts, and access to finance proved important to the success of clusters development.

Many of these factors are deficient in developing countries.

Australian experience with resource corridors and special economic zones has not been equally positive. Resource corridors require early coordination and planning, and careful government intervention to avoid compromising private sector efficiency which largely depends on integrated supply chains.

The case of Rio Tinto's Simandou mine in Guinea illustrates the challenges and development opportunities that are associated with the design and implementation of resource corridors. The 10 kilometer wide corridor – said James Dobbin – links the mine to the port via a 650 kilometers railroad: this is the largest integrated mine, road, rail, and port infrastructure under construction in the world. In designing the corridor, planner had to establish its extent and estimate the potential that could be unlocked along the route which runs through almost inaccessible land with high poverty rates. This growth corridor underpins investment in agriculture, aquaculture, and service industry that would not be otherwise economically viable. To unlock this potential telecommunication infrastructure extends throughout the length of the railroad, and direct investment in enterprise support and up scaling of the local workforce have been planned. Estimates of economic impact suggest that a potential 3 billion dollars contribution to the economy in addition to the mining sector's direct contribution, about half of Guinea's GDP in 2011. The successful planning of growth corridors requires access to data, thinking outside administrative boundaries; and the ability to envision the future. Implementation requires a partnership approach among extractive companies, the government, and donors, and a large extractive project to start with.

G – Day 2, Keynote speech: Local Content Implementation: Lessons from Nigeria

Measures to stimulate domestic participation have been in place for a long time in Nigeria. Petroleum contracts of all vintages contain requirements for the use of local goods and services, and training obligations. These requirements were strengthened in the 2000, 2005, and 2006 licensing rounds during which, among the criteria for award, bidders were asked to commit to the development of Nigerian expertise and know-how. In a crescendo of mandatory local content measures, the Nigerian parliament

approved the Nigerian Oil and Gas Industry Content Development Bill on April 22, 2010 (the "Bill"). The Bill established the Nigerian Content Development Board (NCDB) tasked with increasing indigenous participation in the oil and gas industry; building local capacity and competencies; creating linkages to other sectors of the national economy; and boosting industry contributions to the gross domestic product. After providing a description of local content polices Ernest Nwapa – Executive Secretary of the NCDB – shared the result of the analysis carried out by the NCDB on lessons learned from the implementation of the various vintages of local content policies. These are summarized below:

- Local content policies can be a major change since they promote in-country retention of spend and creation of value. Market resistance is normal, often on grounds of costs, quality, reliability, free trade, and shareholders' returns.
- The policy must be championed from top and grounded in the national development policy. In Nigeria, the Chairman of the NCDB's Governing Council is member of the Federal Executive Council and has a direct reporting to the President.
- Policies need to be consistently applied, and bring measurable results in order to reduce resistance. Transparent policies and implementation rules, as well as workshops and other outreach activities help towards achieving this objective.
- There should be more emphasis on development impact and less focus on regulations. Policies should aim at outcomes. Over-regulating is counter-productive, especially in the presence of low capacity. Government and companies need to work together, and engage with other stakeholders, e.g. universities, local communities, regional authorities and so on. Creating jobs is a political and economic imperative. To this end, the education and training policies need to be tuned to industry needs.
- Information is critical and requires the creation of a data management system. Data are necessary to design the policy, and monitor the effects of its implementation. This, too, requires planning and early engagement with companies.
- Contracts give monetary gains. Manufacturing provides jobs – creates linkages to other sectors. Local content policies in Nigeria have evolved over time from the short term focus on maximizing revenue to the longer objectives of creating a diversified local economy. In other words, Nigeria has moved from a logic of supplier to one of manufacturer. To this end, improving the national system of innovation is a critical step towards the development of a sustainable and competitive local industry.
- Asset ownership and yard developments attract investments. To avoid the creation of paper companies, local companies are required to own substantial assets. This requirement has led to the increase in the number of partnerships with foreign investors resulting in transfer of knowledge and technology.

- Funding can be a major hurdle for local companies in developing markets. Local banks can fund substantial portion of investments. Several initiatives are underway to provide funding opportunities to local companies, including the Nigerian Content Development Fund, and the Shell Kobo Fund.
- Training and employment connects the local communities. Project based training earmarks slots for indigenes of oil producing communities. On the job training has proven very effective.
- Taking industrial activities and employment close to the oilfield (so called "local-local") creates ownership and shared interest with host community. The Nigeria Oil and Gas Industrial Parks Scheme is designed to facilitate the creation of linkages through the use of clusters and growth corridors.

H – Day 2, Session 6: Local content policies design and implementation issues

The design of effective and sustainable local content policies and the choice of policy tools for their implementation require the definition of the economic, social, and political objectives that policy makers wish to achieve through their application. Extractive potential, geography, level of economic diversification, structure of the labor market, quality and extent of infrastructure, trade agreements, regulatory and institutional capacity and so on, come into play in defining the scope and objectives of local content policies. This explains the wide variety of policy approaches across countries and their tendency to evolve over time. This session focused on the common challenges for the design and monitoring of implementation of local content policies, and ways to overcome these challenges.

Moderator: Silvana Tordo, Lead Energy Economist, Extractive Industries, Sustainable Energy Network, World Bank

Lead Presentation: Nicolas Maennling, Economics and Policy Researcher, Vale Columbia Center on Sustainable International Investment, Columbia University Law School

Panel:

- Stephen Masele, Deputy Minister, Ministry of Energy and Minerals, Tanzania Datuk Shahrol Azral bin Ibrahim Halmi, Director, National Key Economic Areas, Oil, Gas and Energy, PEMANDU, Malaysia
- Nurlan Zhumagulov, Senior Manager, Local Content Development Department, Contract Agency, Ministry of Oil and Gas, Kazakhstan
- I Gusti Putu Suryawirawan, Director for Base Metal Industries, Ministry of Industry, Indonesia
- Eric Bisil Bamamen, Extractive Industries Program Coordinator, Center for Environment and Development, Cameroun

Nicolas Maennling provided a brief overview of the most common factors that affect the design and effectiveness of local content policies. These have to do with the type of policy (assertive, which mandates targets and obliges the preferencing of nationals and local suppliers, or encouraging, which incentivizes investors' behavior and proposes targets that are aspirational and not mandated), the definition of what is local (national or domestic content), the choice of policy indicators (quantitative, qualitative, output, outcome, reporting requirements), the existence of information asymmetry among stakeholders, the credibility of the policy (adequate institutional capacity, incentives, penalties, sunset clauses), and limitations that may be imposed by trade agreements.

If "picking winners" is a difficult task, setting the correct metrics to guide market behavior does not come without challenges. Malaysia's government has traditionally taken a proactive role in guiding economic diversification and growth. But, as Sharol Halmi said, the adoption of the Economic Transformation Plan in 2010 marked a considerable shift in philosophy. Economic planning moved from an approach aimed at maximizing local content levels to one aimed at maximizing the gross national income through emphasis on value addition, building of competitive advantages, and ensuring equitable growth. In collaboration with the major oil, gas, and energy companies, the Malaysian government identified an array of projects estimated to have a large impact on the gross national income, determined the necessary level of private and public investment, and the time frame for execution. To measure progress towards achieving the transformation plan's target, a small number of key performance indicators are tracked quarterly and discussed by an inter-ministerial committee chaired by the prime minister. The Malaysian's recipe for success thus include government-industry partnership, a clear long term vision, the use of outcome indicators (as opposed to local content level indicators), and high level political commitment.

Indonesia, another country with a long standing tradition of government intervention in the economy, has adopted a different approach to developing local content. I Gusti Putu Suryawirawan explained the cross sectoral nature of local content policies in Indonesia. Given the large number of state owned enterprises government procurement is an important localization tool. Indonesia is not a signatory to the WTO Agreement on Government Procurement. Under the industrial development program of 2008, the government picked 13 economic clusters with high potential for domestic growth. A domestic appreciation list, vetted by an independent surveyor, enumerates companies that have achieved a certain local content thresholds measured as domestic share of total production cost. Increasing levels of local content are reworded with incentives. Fiscal incentives are also granted to international investors that localize activities that are part of the industrial development program.

Incentives and penalties drive market behavior and add credibility to the policy. However this requires the use of objective metrics and transparent reporting systems. Nurlan Zhumagulov explained how the new measurement and reporting system introduced by the government in 2010 contributed to increase the quality and level of local content. Local content in labor, goods, and services are calculated by applying the uniform methodology developed by the government. An online portal (the "registry") was initially established to reduce information asymmetry between subsoil users and local suppliers, just like in Brazil, and is now also used to monitor local content targets. The policy objectives are to drive skills upgrades in the workforce that would otherwise rely on foreign skilled labor, and attract investment to increase local value added. The policy relies on a mix of incentives to local manufacturers (bidding preferencing) and penalties to subsoil users for lack of compliance with local content targets set in the relevant subsoil contract. In addition one percent of subsoil companies' investment is earmarked for training and education, including training of local manufacturers.

At the opposite side of the spectrum lies Tanzania with sizeable natural gas discoveries, but a lack of capacity, low levels of domestic demand, and rising expectations. As Stephen Masele indicated local content provisions are included in petroleum and mining contracts, and policy principles are detailed in mining and petroleum sector policy documents. But the government of Tanzania is still in the learning phase, and an articulated local content policy has yet to emerge.

Monitoring of progress towards the achievement of local content objectives requires, at a minimum, institutional capacity and a clear set of metrics. What if institutional capacity or regulation is lacking or unclear? Eric Bisil Bamamen proposed two main roles for civil society in capacity constrained environments: urging the government to promote policies that ensure shared benefits from the extraction of nonrenewable resources, and strengthening the monitoring of local content policy implementation. Cameroon does not have a formal local content policy, or criteria to assess the contribution of extractive industry to the development of the local economy. This combined with limited access to information greatly impacts civil society's ability to understand the domestic benefits of extractive activities. In this context bilaterals and multilaterals can play a catalyst role by sharing their experience and expertise to ensure that policies are in place to effectively drive the development of a diversified local economy.

K – Day 2, Session 7: Next steps and closing

The last session of the conference focused on ways in which cross country knowledge and local content implementers' experience could be leveraged and more efficiently shared among local content practitioners, companies, and interested governments.

Moderator: Paulo de Sa, Manager, Extractive Industries, Sustainable Energy Department, the World Bank

Panel:

- Antonio Pedro, Director, United Nations Commission for Africa
- Marinke van Riet, International Director, Publish What You Pay (PWYP)
- Kate Charmichael, Manager, Social and Economic Development, International Council of Mining and Metals
- Wolfgang Kraus, Senior Associate, IPIECA
- Osmel Manzano, Principal Economist, Inter-American Development Bank
- Marc Banzet, Acting Director of Governance and Economic Growth, Strategic Policy and Performance Branch of Canada's Department of Foreign Affairs, Trade and Development
- Lahra Liberti, Senior Adviser on Natural Resources , OECD Development Centre

The importance of knowledge sharing and collaborative approaches in averting the most common design and implementation pitfalls was acknowledged by all discussants. Policy design involves national, regional, local, and cross border considerations. There is no blueprint solution, although sharing countries' and companies' experience helps to fast track the learning curve and to avoid costly mistakes.

While the conference highlighted the clear need for industry-wide collaboration, it also emphasized the important role of government guidance on the issue, and the uniqueness of the oil, gas, and mining industries in terms of size and opportunities for linkages. Many participants referenced the lack of regulatory frameworks as one of the main factors that hinder local content development in some countries.

Donors and other institutions have a role to play as honest brokers, in addition to providing technical and financial assistance. As noted by Kate Charmichael there is a time inconsistency among local content policies' stakeholders that affects policy design and implementation: extractive projects are long term; governments are bound by election cycles; investors look at quarterly reports; and communities would like to see immediate benefits. The alignment of stakeholders' targets, partnerships and early stakeholders' consultations are necessary for local content policies to succeed.

Planning local content from the early stages of project development, multi-stakeholders dialogue, collaboration among extractive companies, and coherent skills upgrades are important success factors – said Wolfgang Kraus – but the regional dimension of extractive projects should not be overlooked.

Marinke van Riet underscored the role of transparency, civil society engagement, and good governance to avert the risk that local content policies may be misused resulting

in a lost opportunity for shared prosperity. The opportunity to leverage the benefits of extractive industry is time bound. It is therefore necessary to go from theory to practice.

Paulo de Sa announced the World Bank's intention to create a global community of practice on local content policies in extractives. The scope of work and institutional arrangements of the community will be defined in a concept note to be prepared by a working group led by the World Bank. Interested participants will be invited to join the working group with the aim to finalize the plan by the end of 2013. The community of practice will complement and leverage existing local content initiatives, contribute to addressing knowledge gaps, and provide assistance on country specific local content policies design and implementation issues.

III. CONCLUSIONS AND NEXT STEPS

Three main conclusions emerged from the conference:

- Well designed and implemented local content policies have the potential to support sustainable and shared development through economic diversification and the creation of employment opportunities. This requires early engagement and collaboration among stakeholders, and involves cross-sectoral, national, regional, local, and cross border considerations. There is no blueprint solution, although sharing countries' and companies' experience helps to fast track the learning curve.
- For the private sector supporting local employment and a competitive and sustainable local industry require actions that go well beyond the remit of the corporate social responsibility agenda, requiring industry-wide collaboration and multi-stakeholders involvement. But private sector led initiatives need to be grounded in the overall local content strategy of the government. The lack of a clear strategy and regulatory framework ultimately hinder local content development.
- Policy design involves national, regional, local, and cross border considerations. The intersection between global and local dimensions of development based on extractives and the time inconsistency among stakeholders places the World Bank in a unique position to use its convening power and global expertise to generate common understanding of the potential benefits of local content policies as well as generating and sharing knowledge on design and implementation pitfalls thus avoiding costly mistakes.

The conference on Local Content Policies in Oil, Gas, and Mining Sector is part of a broader initiative that aims at providing policy makers and the private sectors with options for the design and implementation of economic diversification and employment policies leveraging the extraction of non-renewable resources. To help achieve this objective, we will continue to further the debate and policy work on the themes discussed at the conference. Based on the feedback received by participants at the conference, the Oil, Gas, and Mining Unit, Sustainable Development Department is preparing a program outline for the creation of a global community of practice. The proposed partnership is envisaged to work at three levels:

- Global level: creation of knowledge through targeted research and the development of local content policy and implementation guidelines;
- Country level: this will include technical assistance to governments for the design or reform of local content policies and related institutional arrangements; Development of local content implementation strategies and local content enabling environments through pilot projects and the promotion of joint initiatives among private and public stakeholders; and
- Dissemination: this will include the organization of country and regional workshops, international conferences, publication of reports, and other outreach activities.

A working group comprising representative of governments, industry, academia, and civil society will be established to help to finalize the proposal, and consultations will be carried out in December 2013.