

HOW AN INDUSTRIAL BASELINE SURVEY CAN INFORM LONG-TERM STRATEGIC PLANNING AND FACILITATE CREATION OF SUSTAINABLE ECONOMIC LINKAGES

Framework Step:

STEP 2 - Build an empirical basis to inform decision-making through an inclusive participatory process

2 A. What can host governments do?

- Consider the full life cycle of natural resource developments and their value chains when identifying in-country shared value opportunities.
- Classify systemic value chain links to show the nature of potential interconnections with other products and services in the renewable and non-resource sectors to identify segments with high growth potential. Take appropriate measures so that the extractives sector becomes a catalyst and an anchor for growth, diversified economic activity, and integrated territorial development, creating linkages through which knowledge, inputs, and labour can flow.

2 B. What can extractives industries do?

- Provide information on an individual basis (to avoid any anti-competitive issues) to governments on future demand for workforce, goods, services, infrastructure, technologies, and other inputs (such as land, water and energy) along the project lifecycle.

2 C. Host governments, extractives industries and civil society can work together to:

- Recognise that there may be areas of value creation beyond early reach, dependent on the type of resource, the maturity of the sector, the level of industrialisation and, more generally, the stage of development of the economy.
- Collect and aggregate the extractives sector's current and future needs, in terms of demand for workforce, goods and services, infrastructure and use of other inputs (such as energy, land and water).
- Identify any barriers to entry for the production of certain products or the development of certain activities, taking into account the structure and dynamics of domestic, regional and global markets.
- Identify goods and services that are both specific and not specific to the extractives industry, highly specialised, or subject to strong competition.

STEP 3 - Unlock opportunities for in-country shared value creation: local workforce and supplier development; shared infrastructure (power, water and transport)

3.1.A. What can host governments do?

- Undertake a baseline assessment and build credible and reliable statistics on existing industry capacity, size of local enterprises, level of participation, supplier landscape and institutional capacity for skills and small and medium-sized enterprise development to inform strategic planning, required skills upgrading and technical training activities.

3.1. C Host governments, extractives industries and civil society can work together to:

- Collectively assess existing industry capacity, level of local participation, and supplier 'landscape', to inform strategic planning, required skills upgrading, and technical training activities.
- Evaluate the time and resources needed to close any identified technological, infrastructure, capabilities, and financing gaps.

Tags:

- local employment
- local supplier participation and development, including SMEs
- marginalised groups (women, indigenous people)
- skills development and upgrading
- access to credit
- shared infrastructure (transport, water, power)
- technology transfer
- innovation
- economic diversification
- Other: _____

Problem Statement:

The oil and gas industry in Uganda is relatively new as commercially exploitable reserves of oil were found in the Albertine Lakes Basin in 2009. Prior studies commissioned by the government indicated that local capacity in the sectors needed to supply international oil and gas companies, particularly those relating to the high-tech and capital intensive nature of upstream activities, were low. These studies, such as the Uganda government's 2011 *National Content Study in the Oil and Gas Sector in Uganda*, did not however provide sufficiently detailed data to move forward with a comprehensive approach. At the same time, potential Ugandan suppliers faced a lack of information on the economic and business opportunities associated with the development of Uganda's gas and oil industries.

With commencement of the exploration phase of the Lake Albert Basin Development Project in 2011 by Joint Venture (JV) partners Tullow, Total and the China National Offshore Oil Corporation, and the consideration of national content legislation by the Ugandan legislature, existing capabilities and opportunities for in-country value creation from oil and gas projects were not sufficiently or accurately mapped. For service providers to respond effectively to the demands of the Project, and for the government of Uganda to design legislation and programs that ensured the potential for local participation, both government and industry recognised that more granular data and greater visibility and information about linkages and opportunities, including anticipated supply, capacity and compliance, was required.

Parties Involved:

- Total E&P Uganda Ltd (Total, JV operator)
- Tullow Uganda Operations Pty Ltd (Tullow, JV partner)
- China National Offshore Oil Corporation (CNOOC, JV partner)
- Schlumberger Consulting, an Oil and gas service provider
- Government of Uganda, Ministry of Energy and Mineral Development

Common ground:

The Industrial Baseline Survey (IBS) exercise in Uganda was conducted by the JV partners in 2013, when a final investment decision in the Lake Albert Basin Development Project was still pending, and as draft national content legislation was being considered by the Ugandan legislature. The JV partners recognised that both of these steps would benefit from greater visibility of existing national content opportunities, including market capacity and constraints. Facilitated by the debriefing process of a Working Group established by the JV partners on national content in Uganda, in which government was invited to participate, the parties were therefore able to arrive at common ground and align on the need for a comprehensive demand and supply mapping survey. Through the debriefing process of the Working Group, the Terms of Reference (ToR) for the IBS were agreed in consultation with government. The government's early involvement in the process was also reflective of a recognition that results of the IBS would facilitate planning for future mapping and areas requiring more in-depth analysis. This included the development of sound national content legislation by mobilising the planning capacity of upstream operators in favour of in-country industrial and workforce planning. The government's objectives, of developing and diversifying the economy, the need for a long-term vision, and the robust methodological and empirical approach of the IBS were therefore also key motivations for government engagement with the process.

Actions taken:

The primary aim of the IBS was to determine the potential demand of the Lake Albert Basin Development Project for skilled workforce, goods and services, to identify the potential gaps and to align this with the capacity of the Ugandan market to deliver them. The IBS sought therefore to assess and analyse the demand and supply needs, for example workforce development and equipment, and to identify opportunities for maximum national participation in Uganda's oil and gas sector.

In developing the IBS, the JV partners established a National Content Working Group, comprised of one member from each JV partner and a technical advisor, and with support of a specialised oil and gas service provider, Schlumberger Consulting. Through this Working Group process clear objectives for the IBS were drafted, and then shared with the government in a debriefing process through which the ToR for the IBS were then agreed between the parties. Schlumberger were then contracted to carry out the survey, to map the Ugandan market and to identify what competencies and companies were already available, and to propose actionable steps to address gaps.

In the first stage of the survey, the industrial sectors likely to be directly or indirectly impacted by future oil and gas projects in Uganda were identified. This step focused on the potential for national content based on an assessment of **benefits** to the country (number and skill level of jobs created) and **feasibility** (investment and ramp-up time required to comply with international industrial, HSE and human rights oil and gas standards). Having started with an initial list of over 400 industry sectors, 25 sectors with a high potential for local content benefits and feasibility were identified and included in a "Benefits-Feasibility Matrix." From there, each identified sectors' existing gaps were mapped in terms of both **quantity** and **quality**, in particular, against compliance with relevant international oil and gas standards. The 25 identified sectors were also analysed in detail through a questionnaire sent to relevant companies. The questionnaire was designed to be short and simple, with questions limited to the production capacities of companies, and the number and profiles of employees. Almost 100 meetings and interviews were held to complement the information collected through the questionnaires. This process also enabled suppliers to identify areas in which they felt support was required, such as greater visibility over demand, access to finance, improvement of infrastructure, support in obtaining approvals, skills development, reinforcement of international oil and gas standards, and increased supplier capacity.

In parallel, demand by the three JV partners was also calculated against each of the 25 sectors, taking

into account an estimation of the peaks of construction, and corresponding needs. This phase of the IBS also included an assessment of future manpower requirements over the lifetime of the project focusing on the number of people required, disaggregated by each phase of the project, by domain, education background, skill level, function, and certification type. The resulting qualitative and quantitative data on demand and gaps was then disaggregated at a level that could be understood by suppliers. Based on these dual mapping exercises, segments of the value chain offering the best potential for local content development were identified.

The results of the IBS indicated that all specialised services were, in the immediate- to short-term, out of reach for the country, and that focus should be placed at first on services such as truck transportation, road construction, waste management, and civil works. Moreover, the study distinguished between segments that required 3 to 6 months training (such as welding) that could be left to the JV contractors, and segments and jobs that would require investment during the pre-project phase and for which government involvement was required (such as high voltage electricians, mechanical work, metallurgy, and civil works). Ultimately, the IBS noted that while a number of sectors would be able to absorb the demands of the project, many would need to enhance their capacity in terms of production volume and standards. It further noted that greater visibility about business opportunities and investment in technology and capacity would be required for local service providers to respond effectively to the demands of the oil and gas development project.

Based on the key findings of the IBS, an Action Plan was developed and proposed to government, with actions assigned to either the JV partners, or government. Actions were designed to support enterprises horizontally (by benefiting all local suppliers) and vertically (by supporting targeted sectors). The IBS identified that supplying the number and level of certification of technicians to comply with international oil and gas standards would be a challenge for the country in the short to medium term, and focus was placed above all on workforce and suppliers development in specific sectors.

Recognising the role of both industry and government in increasing capacity among local suppliers, the IBS recommended the creation of an Industry Enhancement Centre. The aim of the Centre was to assist enterprises with compliance with standards, accounting, applying for tenders, and other technical issues. Lead of this initiative was assigned to one JV partner, and is being implemented in coordination with government and the other JV partners.

Recognising the need to improve communication of demand by industry, a National Suppliers Database was created, to create a record of potential oil and gas suppliers and contractors for the project, and subsequent oil and gas projects. Related actions assigned to government included creation of a National Talent Register. A database was also created listing approximately 400 positions required to construct and operate the infrastructure associated with the Lake Albert project. As of late 2017, the National supplier database was being finalised, and oil and gas standards are being developed for specific sectors by the Uganda Bureau of Standards.

The need for further Capacity Needs Analysis Studies, to identify and quickly develop required skills required for Ugandan participation in the oil and gas sector, was also recommended. A Workforce Skills Development Survey was carried out in 2015, to gain an in-depth understanding of demand and supply gaps for skilled labour for the project and to make detailed recommendations for intervention. In partnership with the World Bank, a five-year Uganda Skills Development Project (USDP) was subsequently funded and became active in October 2016. While implementation of the USDP has faced obstacles, the project targeted programmes to meet skills needs in key priority sectors of the economy, including agriculture, construction and manufacturing, in line with Uganda's National Development Plan (NDP II) and Vision 2040. Other sub-sectors identified as both requiring investment but feasible for development were steel products, hazardous waste management, Protective Personal Equipment, and agriculture.

Obstacles:

- **Timing and scope.** The IBS considered the area for which the JV partners held an existing license and was thus due for development. It did not consider or indicate capacity gaps that may arise should other blocks be explored and/or licensed. As such, given that the IBS was carried out during the exploration phase of the Lake Albert project, by the time data and information were available, the three operators were moving on into the next phase. Subsequent reports by the government such as a March 2015 Audit Report published by the Office of the Auditor General, therefore recommended that the government undertake a study that encompasses the entire explorable area and the whole value chain and life-cycle of the project, from exploration to development and production.
- **Delays.** Following the initial assessments, lags caused by pipeline route planning and approval processes contributed to implementation challenges while also eroding local business confidence. The failure to better manage expectations surrounding such common delays has constrained the study's potential impact.
- **Implementation of IBS Action Plan.** Industry identified a lack of government capacity, both financial and human, to implement the actions from the IBS and to achieve its long-term objectives. The actions assigned to the government through the IBS were supported by development partners; however funding issues, a number of which remain unresolved, have provided obstacles to full implementation. Engaging government earlier in the process is likely to have mitigated these challenges, ensuring alignment of objectives and full implementation.
- **Legislative framework.** Following the experience of other Sub-Saharan countries, Uganda had opted to introduce legislation on local content requirements. In 2016 Uganda issued petroleum regulations dedicated to national content: The Petroleum (Exploration, Development and Production) (National Content) Regulations, 2016 and The Petroleum (Refining, Conversion and Midstream storage) (National Content) Regulations, 2016. These regulations cover the implementation of national content in upstream and midstream petroleum activities in Uganda. The definition of national content refers here to concepts of local employment and training, and local creation of value added. According to The Petroleum (Exploration, Development and Production) (National Content) Regulations, 2016: The Petroleum Authority is responsible for establishing a national supplier database and a national human capacity register. It might also impose a requirement to conduct fabrication and welding activities in Uganda (National Content Regs, Arts. 11, 30, 31).

A number of recommendations from the IBS were thus reflected in the legislation, with execution responsibility becoming a matter of Ugandan law, however, this was done without ensuring the requisite resources were available to enable the government to establish the institutional infrastructure necessary to implement these recommendations. The recommendation to develop a National Supplier Database (NSD) became a matter of law with the Petroleum Authority as custodian, however at the time the government did not have capacity to set up a fully functional database. Again, this highlights the need to engage with government at the outset, to ensure alignment between stakeholders.

- **Budget.** In terms of actions assigned through the Action Plan to industry, the JV partners were allowed to provide a budget for these recommendations on the understanding that costs would be recuperated through production. The budget for the study was approximately USD 1.5 million. While elements of the Action Plan were yet to be approved, that, as of late 2017 production had not commenced led to uncertainty surrounding resource allocation for further implementation of the Action Plan.

- The IBS has proven a key driver to align all stakeholders on realistic expectations. While the IBS provided detailed recommendations relating to supplier development programs, feedback from the Association of Uganda Oil and Gas Survey Providers suggested that there had been limited efforts by government to develop suppliers for the oil and gas sector in the period 2010-15. Effectively managing expectations may therefore remain a key challenge of the IBS.

Enabling factors:

In planning for the IBS, there was strong coordination between the JV partners and the government. In developing the IBS and through the studies carried out by Schlumberger Consulting, a consultative, process-oriented approach was encouraged including through the approximately 100 consultations held by the industry with local suppliers and companies representing 25 sectors. At the implementation level, a clear action plan was developed and agreed to between the parties, with each party being assigned a specific intervention to execute.

Careful planning, a methodological approach, a collaborative and robust partner (in this case, Schlumberger Consulting), and the overall objective of developing economic intelligence to facilitate a long-term vision, and to leverage the analysis offered by the survey, proved to be paramount factors.

Lessons Learned:

The IBS, jointly commissioned by the JV Partners in Uganda in 2013, serves as an illustrative case of how anticipation over industry's future needs can help identify gaps and opportunities for in-country shared value creation, and for both government and industry to work together to better plan required measures to leverage this potential. The IBS facilitated the development and exchange of information regarding the capacity and status of industry in Uganda covering a wide range of sectors in detail. By building on previous studies, and increasing the granularity of available empirical data, the IBS identified opportunities where real value could be added, recognising differing timelines for different sectors and noting that the starting point was low in many cases. The results of the IBS helped in turn to clarify areas that required greater attention by both industry and government. This also enabled the government to move forward in developing further studies that fed directly into policy development and implementation processes.

Informed by the results of the IBS, the Government and JV partners are, for example, in the process of setting up an Industry Enhancement Centre, to build capacity among local suppliers in areas identified by the IBS as both in need and viable. Needs being addressed include understanding international oil and gas industry quality standards, and developing capacity in contract bidding processes, the preparation of business plans, financial statements and loan applications.

The IBS also illustrates, however, the importance of engaging government from the outset. For example, implementing actions and decisions reached through the IBS Action Plan required effective partnerships and a long-term vision. The aim of a baseline survey should be the systematic transformation of the economy through these partnerships. When baseline surveys are industry-led, starting discussions early with the government is therefore imperative to ensuring an effective enabling environment and an approach that ensures systematic positive and long-term benefits for the host country.

The detailed and comprehensive nature of the IBS, particularly in terms of sectoral coverage, also highlighted that local content efforts may not be best tied to one specific project, but instead should be framed with due regard to the whole value chain and project life-cycles. While the various surveys, including the IBS, in Uganda have led to some duplication, to a large extent the IBS and subsequent

studies carried out by the government have complemented each other by identifying issues that required greater specificity, while responding to the needs of industry and government and contributing to Uganda's nascent national content and local content policy making processes.

The level and granularity of data collected through the IBS study further helped to highlight the significance of information asymmetries in the emergent oil and gas sector in Uganda. One of the primary needs identified through the IBS was therefore greater transparency, communication by industry, and access to information for Ugandan suppliers. This includes information about oil and gas companies' needs, and about international industrial, HSE and human rights oil and gas standards for local companies to be in a position to supply various goods and services.

Finally, a key challenge in Uganda (and Sub-Saharan Africa generally) is the level of informality from local businesses, limiting the capabilities for linkage development, a factor that is often not taken sufficiently into consideration in surveys or analysis of supply chains and local content approaches. The IBS endeavoured to capture in a comprehensive manner supply and demand for national participation in the opportunities produced by the emergent oil and gas sector in Uganda. While international oil and gas companies' direct linkages with the informal sector may be limited, that this study did not capture the substantial informal sectors in Uganda should be kept in mind when designing and planning similar studies, and formulating policy responses.