CNUCED

Améliorer les effets structurants du secteur des ressources minérales dans les pays de la Communauté économique d'Afrique centrale

Atelier régional et lancement de projet

N'djamena, Tchad, 25-30 novembre, 2015

Renforcement des capacités du secteur des ressources minérales sur l'économie locale
Perspective régionale et internationale

par

Samuel Safo Tchofo
Vice-Président Exécutif
CONSOLTIA

Les opinions exprimées sont celles de l'auteur et ne reflètent pas nécessairement les points de vue de la CNUCED
The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.
Renforcement Des Capacités Du Secteur Des Ressources Minérales Sur L'économie Locale

Perspective Régionale Et Internationale

Samuel Safo Tchofo
Vice-President Executif
CONSOLTIA
Content

- General aspects and definitions
- Economic environment and Local content expectations
- Local content objectives setting and control
- Local capacity building summary
- Regional content
- Comparison & Risks
Model: Curse or Blessing?

The unbalance will lead to the dutch disease: “curse” of oil
The right balance will create wealth: “blessing” of oil
Definitions

• Ipieca
  – The added value brought to a host nation through the activities of Oil and gas industry

• Brazil
  – The Percentage of Material equipment, systems and services produced locally in relation of total amount of purchase made by a concessionaire in Brazil
Local content objectives: Norway-Nigeria

- **Norway:**
  - Maximize value creation from petroleum activities – prudent resource management

- **Nigeria**
  - Building a new Oil & Gas Industry using NCD as instrument for industrialisation of Nigeria
Local content objectives: Ghana

- Promote the maximisation of value-addition and job creation through the use of local expertise, goods and services, business and financing in the petroleum industry value chain and their retention in the country; develop local capacities in the petroleum industry value chain through education, skills transfer and expertise development, transfer of technology and know-how and active research and development programs; achieve the minimum local employment level and in-country spend for the provision of the goods and services in the petroleum industry value chain; increase the capability and international competitiveness of domestic businesses; and achieve and attain a degree of control for Ghanaians over development initiatives for local stakeholders”
Countries with recent Local Content legislations

<table>
<thead>
<tr>
<th>Country</th>
<th>Year enacted</th>
<th>Production (Thousand BOPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>1972</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>1974</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
<td>3000</td>
</tr>
<tr>
<td>Nigeria</td>
<td></td>
<td>2500</td>
</tr>
<tr>
<td>Angola</td>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td></td>
<td>1500</td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>Trinidad</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Tobago</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>E. Guinea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gabon?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uganda</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Key Aspects in Oil, Gas, Mining Development

Mineral Industry
- Legal
- Financial
- Technology
- Human resources

Raw material

Transformation & Manufacturing Industry

Added Value

Consoltia Consulting for Africa
Key components

• Worforce
  – Recruitment
  – Training

• Technology & Local Suppliers
  – Sourcing
  – Development

• Social responsibility

Appropriate legal framework
Direct, Indirect, Induced Activity

Direct jobs

Indirect jobs

Induced jobs

Multiplication factor (4 to 10)

1 \times N
Content

- General aspects and definitions
- Economic indicators and Local content expectations
- Local content objectives setting and control
- Local capacity building summary
- Regional content
- Comparison & risks
## Economic Indicators 1/2

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>421</td>
<td>1902</td>
<td>0.944</td>
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<tr>
<td>Malaysia</td>
<td>328</td>
<td>696</td>
<td>0.773</td>
<td>18</td>
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<td>Trinidad and Tobago</td>
<td>29</td>
<td>116</td>
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<td>79</td>
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<tr>
<td>Kazakastan</td>
<td>203</td>
<td>1717</td>
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<td>77</td>
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<tr>
<td>Brazil</td>
<td>1903</td>
<td>2950</td>
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<td>120</td>
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<td>Indonesie</td>
<td>895</td>
<td>913</td>
<td>0.684</td>
<td>114</td>
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<tr>
<td>Gabon</td>
<td>15</td>
<td>240</td>
<td>0.674</td>
<td>144</td>
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<td>Ghana</td>
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<td>106</td>
<td>0.573</td>
<td>70</td>
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<td>267</td>
<td>0.564</td>
<td>178</td>
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<tr>
<td>E. Guinea</td>
<td>8.5</td>
<td>269</td>
<td>0.556</td>
<td>165</td>
</tr>
<tr>
<td>Angola</td>
<td>106</td>
<td>1756</td>
<td>0.526</td>
<td>181</td>
</tr>
<tr>
<td>Cameroun</td>
<td>29.6</td>
<td>81</td>
<td>0.504</td>
<td>158</td>
</tr>
<tr>
<td>Nigeria</td>
<td>515</td>
<td>2427</td>
<td>0.504</td>
<td>170</td>
</tr>
<tr>
<td>Tchad</td>
<td>13</td>
<td>103</td>
<td>0.372</td>
<td>185</td>
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<tr>
<td>RDC</td>
<td>32.7</td>
<td>20</td>
<td>0.338</td>
<td>184</td>
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## Economic indicators 2/2

<table>
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</thead>
<tbody>
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<td>Norway</td>
<td>421</td>
<td>1902</td>
<td>0.7</td>
<td>2.2</td>
<td>1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>328</td>
<td>696</td>
<td>4.7</td>
<td>6</td>
<td>4.8</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>29</td>
<td>116</td>
<td>1.7</td>
<td>1.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Brazil</td>
<td>1903</td>
<td>2950</td>
<td>2.7</td>
<td>0.1</td>
<td>-0.1</td>
</tr>
<tr>
<td>Indonesie</td>
<td>895</td>
<td>913</td>
<td>5.6</td>
<td>5</td>
<td>5.2</td>
</tr>
<tr>
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<td>240</td>
<td>5.6</td>
<td>5.1</td>
<td>4.4</td>
</tr>
<tr>
<td>Ghana</td>
<td>39</td>
<td>106</td>
<td>7.3</td>
<td>4.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Congo Brazaville</td>
<td>13.5</td>
<td>267</td>
<td>3.3</td>
<td>6.8</td>
<td>1</td>
</tr>
<tr>
<td>E. Guinea</td>
<td>8.5</td>
<td>269</td>
<td>-4.8</td>
<td>-3.1</td>
<td>-15.4</td>
</tr>
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<td>Angola</td>
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<td>1756</td>
<td>6.8</td>
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<td>2427</td>
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<td>6.3</td>
<td>4.8</td>
</tr>
<tr>
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<td>13</td>
<td>103</td>
<td>5.7</td>
<td>6.9</td>
<td>6.9</td>
</tr>
<tr>
<td>RDC</td>
<td>32.7</td>
<td>20</td>
<td>8.5</td>
<td>9.2</td>
<td>8.4</td>
</tr>
</tbody>
</table>

**source:** IMF Eia IMF
Local content marathon

- Local content detailed objectives depend on countries development level and development strategy
- No standard tool box but some comparable countries
- Each country competes against its own development
- Time lines for achievement will be different
- *It is a marathon, not a sprint*
Local content Drivers vs Cies

Countries
- Economic growth
- Local capacity
- Employment
- Nationals Empowerment
- Social development

Companies
- Business Growth
- Efficiency
- Profit & Cost controls
- Fair business rules
- International Standards
## IOC’s Local Content strategy

<table>
<thead>
<tr>
<th>Company</th>
<th>Strategy name</th>
<th>Main Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExxonMobil (2008)</td>
<td>National Content Strategy</td>
<td>Workforce development, Supplier Development, Strategic Community investments</td>
</tr>
<tr>
<td>Statoil (2010-2011)</td>
<td>Positive local impacts, Local content, Local Procurement, Local supplier development, Education and training</td>
<td></td>
</tr>
<tr>
<td>Total (2012)</td>
<td>Local content Programs</td>
<td>Local training and Recruitment, More Nationals in the Workforce, Supporting local Entrepreneurs, Supporting SME’s</td>
</tr>
<tr>
<td>BP 2005, 2009</td>
<td>Local content development strategies</td>
<td>Local supplier development, Develop local expertise, Local supplier participation</td>
</tr>
<tr>
<td>Shell (2013)</td>
<td>Impact on local communities</td>
<td>Creating Jobs, Capacity and Technology building, Contracting and business opportunities, Social investment</td>
</tr>
</tbody>
</table>
Local content Drivers vs Cies

**Countries**
- Economic growth
- Local capacity
- Employment
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- Social development

**Companies**
- Business Growth
- Efficiency
- Profit & Cost controls
- Fair business rules
- International Standards

Local content to bring in common ground and mutual benefits
Activity Specificities

- Capital extensive
- High level expertise
- High level of Technology
- High Quality & Safety standards
- High Productivity
- High salaries/compensation
- Cyclic
Historical Oil Price

Cost and people reduction during down cycle
Top recent profitable companies

- Profit > 30$B two consecutive years
  - ExxonMobil
  - Royal Dutch
  - China Construction Bank
  - Gazprom
  - Apple
  - Industrial & Commercial Bank of China
## Largest employers in the world (2012)

<table>
<thead>
<tr>
<th>Employer</th>
<th>Employees</th>
<th>Headquarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Department of Defense</td>
<td>3.2 million</td>
<td>United States</td>
</tr>
<tr>
<td>People’s Liberation Army</td>
<td>2.3 million</td>
<td>China</td>
</tr>
<tr>
<td>Walmart</td>
<td>2.2 million</td>
<td>United States</td>
</tr>
<tr>
<td>National Health Service</td>
<td>1.7 million</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>China National Petroleum Corporation</td>
<td>1.6 million</td>
<td>China</td>
</tr>
<tr>
<td>State Grid Corporation of China</td>
<td>1.5 million</td>
<td>China</td>
</tr>
<tr>
<td>Indian Railways</td>
<td>1.4 million</td>
<td>India</td>
</tr>
<tr>
<td>Indian Armed Forces</td>
<td>1.3 million</td>
<td>India</td>
</tr>
<tr>
<td>Hon Hai Precision Industry (Foxconn)</td>
<td>1.2 million</td>
<td>Taiwan</td>
</tr>
</tbody>
</table>

Source: BBC
Content

- General aspects and definitions
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<table>
<thead>
<tr>
<th>Exploration</th>
<th>Appraisal</th>
<th>Development</th>
<th>Production</th>
<th>Mid and downstream</th>
</tr>
</thead>
</table>

**Categories Ranking by Cost**

- FEED, Fabrication, Construction
- Drilling, Well services
- Operations support & production
- Logistics (Marine operations...)
- Sub-surface services
- Consulting, Professional Services, Business Support

**Exploration:**
- High investment risk

**High Value created through optimization of Field Development and Production**

**Production enhancement**
Local content companies sub-sectors: Angola example

- **Exclusivity Regime**: No Know how required (Catering, Cleaning, Transportation,....) ➞ Only “Angolan” Cos can be awarded such Contracts. Foreign Cos can however be partially sub-Contracted.

- **Semi-Competition Regime**: Higher level of Know-How & reasonable level of investment ➞ such contracts can be awarded only if they executed through association with Angolan Cos or as sub-contractors of the latter.

- **Competition Regime**: Specialized Know-How & high level of investment (All activities not listed in the 2 previous regimes ➞ Could be awarded to foreign Cos).
Local Content Companies Sub-Sectors: Nigeria Example

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% Local content</th>
<th>Spend or manhour</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEED and ENGINEERING SERVICES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FABRICATION AND CONSTRUCTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATERIAL AND PROCUREMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WELL AND DRILLING SERVICES TECHNOLOGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESEARCH AND DEVELOPMENT SERVICES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEISMIC, EXPLORATION, SUBSURFACE PETROLEUM ENGINEERING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRANSPORTATION/SUPPLY/DISPOSAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEALTH SAFETY AND ENVIRONMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INFORMATION SYSTEMS, TELECOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MARINE OPERATIONS AND LOGISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FINANCE AND INSURANCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INSTALLATION, HOOKING AND COMMISSIONING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INSPECTION TESTING AND CERTIFICATION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROJECT MANAGEMENT, CONSULTING SERVICES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SURVEYING AND POSITIONNING SERVICES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MODIFICATION AND MAINTENANCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHIPPING</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Setting Local Content Objectives

| S | Specific | Take into account sub-sectors, categories, and Sustainability |
| M | Measurable | Manhour, % spend |
| A | Achievable | Take into account the development phase, the available support, the control measures |
| R | Realistic | Take into account country local capacity, Regional content |
| T | Time bound | Take into account time to develop People and SME and phases duration |

Requires good understanding of Mineral Industry, good assessment of Local Suppliers & Local Workforce
Implementation Controls

- Countries examples:
  - Brazil: ANP
    - Certification system, % spend checked quarterly
  - Nigeria: NCDMB
    - Local content verifications of achievements
- In many countries controls are by:
  - Labor ministry, Petroleum ministry
- High Local content requirements will require a complex control system
Content

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HR and SME’s development

- People as main asset
- SME are key for employment
- Believe in training and development
- Career and growth opportunity
- High standard of performance
- Long term vision
- Should reduce overall cost
Accelerating capacity building

- Nothing done
- Academic and sporadic actions
- Structured plan with mentoring and monitoring

Results vs. Time

Significant Improvement

Nothing done

Academic and sporadic actions
Local QHSE Performance Profile Example: EG 2011

Region

Compliance Audit:

- Journeymen Management 6 Driving Standard Self Audit
- Lifting Equipment Standard Self Audit
- Site Security/Monitoring Inspection (PM/RM)
- Noise Prevention Standard Self Audit
- Environmental Standard Self Audit
- LFP Standard Self Audit
- Fatigue Management Audit
- Electrical Standard Self Audit
- Water Management Contractor Survey (FM/PM)
- API 570 Standard Self Audit
- MPQ Standard Self Audit
- EPIC/SCSI Standard Self Audit
- Health Standard Self Audit
- Material Substitution Self Audit
- Seismic Standard Self Audit
- Contractor Management Self Audit
- Project Standard Self Audit
- The Standard Self Audit
- Radiation Standard Self Audit
- Explosive Standard Self Audit
- Customer Data Standard Self Audit
- Audit Programs (US Domain Only)

EG

Compliance Audit:

- Journeymen Management 6 Driving Standard Self Audit
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Europe Africa
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Benefits of Regional Expertise

- Local Culture
- Individual Identification
- Neighborhood effect
- Cost reduction
- Regional Economy
- The Sustainability

Regional Content increases Local Content
## Statistics from Sub-Saharan Africa, Service Provider Company

<table>
<thead>
<tr>
<th>Professional Categories</th>
<th>Nb of Positions</th>
<th>SSA Nationals</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operators</td>
<td>559</td>
<td>562</td>
<td>101%</td>
</tr>
<tr>
<td>Specialist &amp; Engineers</td>
<td>1269</td>
<td>1308</td>
<td>103%</td>
</tr>
<tr>
<td>Senior Specialists, Engineers, Geoscientists</td>
<td>940</td>
<td>941</td>
<td>100%</td>
</tr>
<tr>
<td>Managers</td>
<td>409</td>
<td>336</td>
<td>82%</td>
</tr>
<tr>
<td>Senior Managers</td>
<td>70</td>
<td>45</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3248</strong></td>
<td><strong>3189</strong></td>
<td><strong>98%</strong></td>
</tr>
</tbody>
</table>
Local-Regional-International Circles

LRI 3 CIRCLES

Good

Bad

LOCAL
REGIONAL
INT’L

INT, L
REGIONAL
LOCAL
Content

• General aspects and definitions
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Preeminent aspects of local contents in selected countries

- Economic growth
- Local capacity
- Employment (all positions)
- Locals Empowerment
- Social development

<table>
<thead>
<tr>
<th></th>
<th>Brazil</th>
<th>Norway</th>
<th>Nigeria</th>
<th>Angola</th>
<th>Tchad?</th>
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<tbody>
<tr>
<td>Economic growth</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Local capacity</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>Employment (all positions)</td>
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<td></td>
<td>X</td>
<td>X</td>
<td>?</td>
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<tr>
<td>Locals Empowerment</td>
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<td>Social development</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>?</td>
</tr>
</tbody>
</table>
Common risks: Technology interaction Model

Technology is in the green zone
Common Risks and Problems

- Too high goals
- Over Empowerment
- Too quick promotions
- Poor quality
- Salaries conflicts
- Time line
- Overfocus on Oil
- Reservoir/Resource Management
Conclusion

1- Local capacity building makes common and business sense

2- Local content well addressed is mutually profitable

3- The Regional Content is a good way to improve local capacity

4- Capacity building can be accelerated by a structured plan
Thank you for your attention

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Let us bring clarity to complexity
About Consoltia

• Consoltia is a leading provider of consulting services to the Oil & Gas, Energy, and Mining sectors with focus in Africa.

• Consoltia is involved in: Organization and Strategy, HR and Capacity Building, Contracts and Project management, Finances, QHSE

Let’s Bring Clarity to Complexity

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