The Geo-politics of East Africa

Monica Enfield, Energy Intelligence Group

Presentation to the Finding Petroleum Forum
17 April 2012
East Africa Geo-political Issues

Three key dynamics in play for frontier E&P region

- Upstream E&P Project Development
- Gas Monetization Challenges
- Products Hub System

Each has above-ground risk constraints and implications
Upstream E&P Project Development

Variety of frontier play types and company strategies

Conventional Onshore (Rift Basins)

Heavy Oil

Deepwater Gas (Mozambique Channel)
Upstream E&P Project Development
Above-ground risks will impact pace of project development

- Political Instability:
  - High number of conflict, post-conflict and failed states

- Regional Instability:
  - Unstable neighbors, spill-over effect impacting operations

- Corruption:
  - Reliance on patronage networks

- Low Social Development:
  - Lack of government services in areas of operations

East Africa – CRE 2012 Overall Scores

Legend:
1-2 CRE Score (Least Risk)
3-4 CRE Score
5-6 CRE Score
7-8 CRE Score
9-10 CRE Score (Most Risk)

Source: Energy Intelligence Country Risk Evolution Service
Upstream E&P Project Development
Above-ground risks will impact pace of project development

– Monetization Risk:
  • Prioritization of domestic utilization and heavy infrastructure needs

– Weak Sectoral Capacity:
  • Limited institutions and NOCs to manage the sector

– Shifting Fiscal/Regulatory Environment:
  • Move from favorable “frontier” terms to increased take and value-added from the sector as resource development ramps up

East Africa – CRE 2012 Overall Scores

Legend:
- 1-2 CRE Score (Least Risk)
- 3-4 CRE Score
- 5-6 CRE Score
- 7-8 CRE Score
- 9-10 CRE Score (Most Risk)

Source: Energy Intelligence Country Risk Evolution Service
Upstream E&P Project Development
Above-ground risk evolution as resources are developed

Risk

High

Low

Production Phase

Frontier Exploration
Ramp-up
Plateau
Mature

East African Plays:
Current

East African Plays:
Near Term

Above Ground Risks

Geologic Risks

De-Risk Geology
Develop Capacity
Manage Resources
Extend Reservoir Life

The Geo-politics of East Africa
## Above-Ground Risk and Investor Impact

<table>
<thead>
<tr>
<th>Resource Development Stage</th>
<th>Frontier Exploration (Appraisal/Development)</th>
<th>Production Ramp-up</th>
<th>Production Plateau</th>
<th>Mature Production</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industry Activities</strong></td>
<td>• Licensing • Seismic acquisition • E&amp;A drilling</td>
<td>• Project conceptualization and infrastructure investment • Project approvals • Environmental permitting • Production management</td>
<td>• Production management • Additional E&amp;A drilling</td>
<td>• EOR applications</td>
</tr>
<tr>
<td><strong>Government Objectives</strong></td>
<td>• Secure investors with attractive fiscal terms, quick approvals and low regulatory burden • Encourage rapid exploration commitments by license holders</td>
<td>• Build capacity to manage state resources • Includes new institutions and NOC • Revenue generation</td>
<td>• Revenue generation • Value-added investment linkages • NOC and local sector development</td>
<td>• Retain and attract investors • Revenue generation from sector and value-added investments • Opportunities for NOC and local sector</td>
</tr>
<tr>
<td><strong>Above-Ground Risks</strong></td>
<td>• Low entry risks • Low operating risks</td>
<td>• Higher government take • Contract sanctity • Rising NOC mandate and influence • Export restrictions</td>
<td>• Pressure to invest in “value-added” sectors (downstream, power, petchem) • Rising local content • Nationalization</td>
<td>• Decreasing entry risks, but strong NOC presence</td>
</tr>
<tr>
<td><strong>Country Example</strong></td>
<td>• Kenya • Somalia</td>
<td>• Mozambique/Tanzania • Uganda</td>
<td>• South Sudan</td>
<td>• Sudan</td>
</tr>
</tbody>
</table>
Gas Monetization Challenge
Deepwater Mozambique Channel finds to be monetized via LNG

- Infrastructure needs:
  - LNG facilities, pipelines, power generation

- Global gas market linkage:
  - Supply-side competition, demand-side assumptions, pricing concerns

- Host government policy:
  - Evolving natural gas policies from host governments could emphasize greater domestic utilization
Gas Monetization Challenge

Security concerns could also impact LNG projects

Regional Piracy Attacks, 2011

- The East Africa region has seen an increased number of threats on vessels.
- This threat could extend to platforms and supply vessels to the LNG project.
- This will increase costs and lead to project delays.

Products Hub System

Long-term potential to reverse current downstream flows

– East Africa is a product-short region, requiring imports from Indian Ocean
– Kenya is a vital hub for product imports and distribution to inland markets
– New discoveries in Rift Basin could reverse the general flow:
  • Uganda requires domestic refining of all crude, with potential export of excess product
  • South Sudan seeking to build crude pipeline to Kenya
  • New inland Kenya discovery could link to Uganda or South Sudan pipeline system
– Unlike the upstream sector at present, strong downstream NOCs will seek a role in future activity
– Notable absence of supermajors in the downstream sector (except Total), with competitive space occupied by local/regional marketing firms
Concluding Remarks

− The East Africa region continues to offer entry opportunities via licensing rounds and government negotiation, while M&A activity continues apace as the competitive landscape expands.

− However, high levels of political risk in Somalia, South Sudan, Sudan, Congo Kinshasa and Madagascar could deter project development.

− In less risky locations, such as Mozambique, Tanzania, Uganda and Kenya, investors could see above-ground risks evolve as resources are developed, such as changing fiscal terms, decision-making delays within the NOC and ministry, as well as domestic utilization requirements.

− These collective risks may impact the pace of project developments and the overall size of regional resource development.