

# Oil & Gas in Sub-Saharan Africa: Recent Developments, Future Opportunities & Challenges

Relating market dynamics to the training and development needs of professionals working across the region's upstream, midstream, and downstream value chains.

## Executive Summary

Sub-Saharan Africa (SSA) remains a vital province for global oil and gas, with deepwater oil in West and Central Africa, emerging gas mega-projects in East Africa, and frontier discoveries in Southern Africa.

Capital discipline, local content, decarbonisation, and digital operations are reshaping investment decisions. To capture opportunity while meeting ESG expectations, the region's professionals must combine strong technical foundations with modern leadership and project delivery capabilities.



## Recent Developments by Sub-Region



### West & Central Africa

Mature deepwater hubs continue to reinvest via tiebacks and infill drilling, while FPSO life-extension and gas monetisation programmes gain traction. Local fabrication yards and marine services have expanded to support brownfield workscopes.

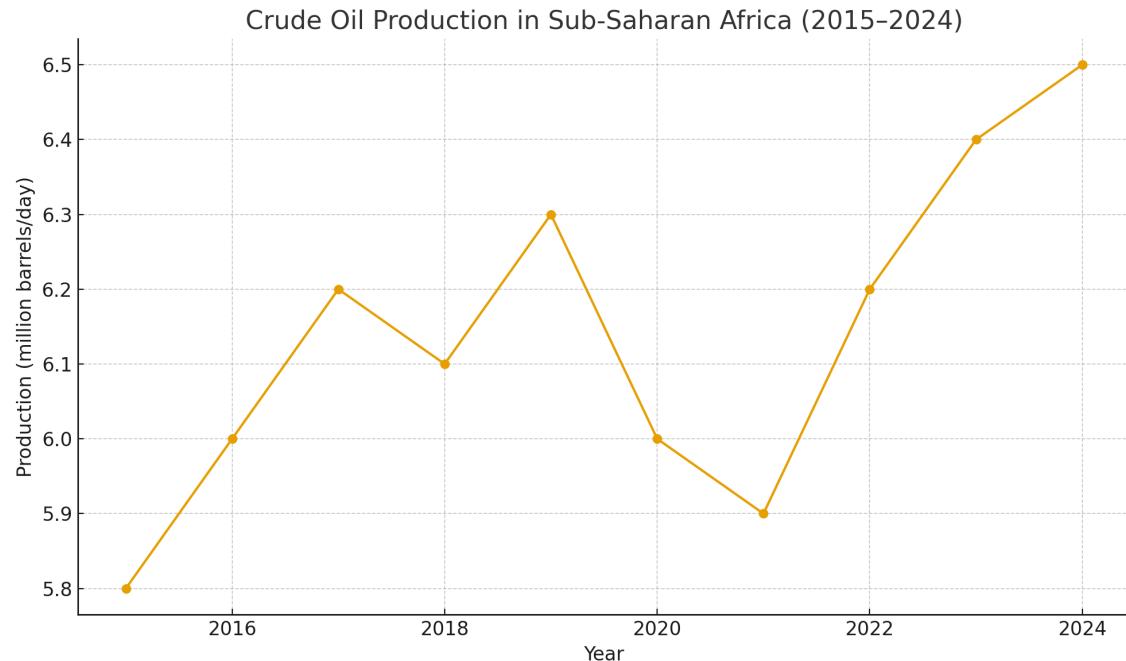
## East Africa

Large offshore gas resources underpin LNG ambitions. Project phasing, security, financing structures, and local workforce readiness are central to moving projects to FID and execution.

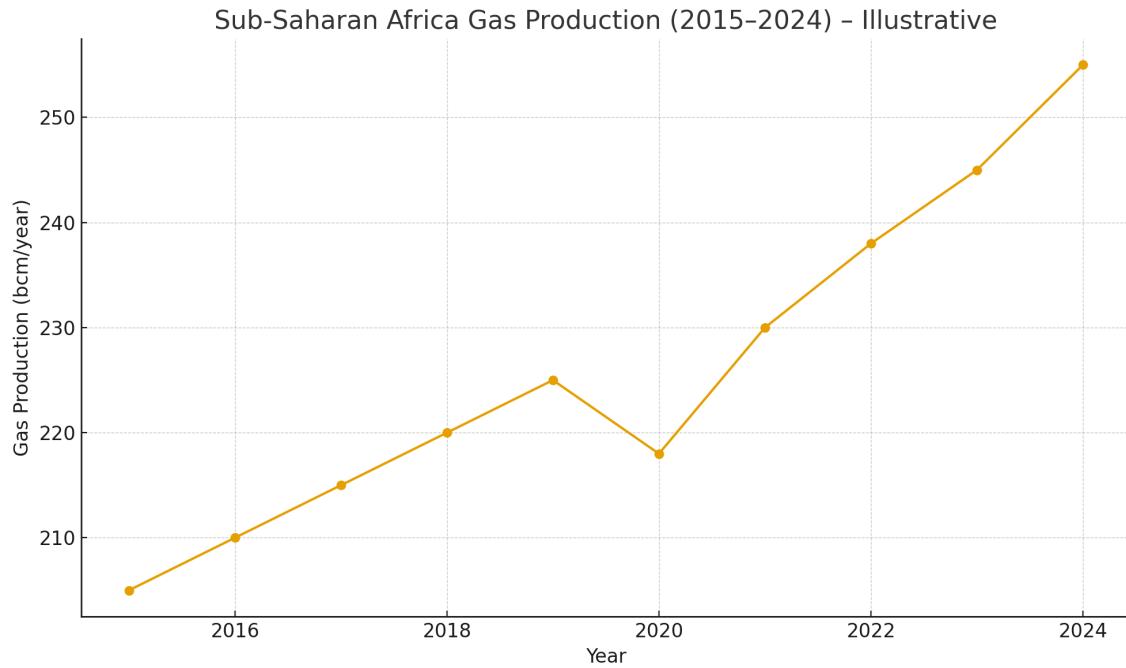


## Southern Africa

Frontier basins show promising liquids and gas potential. Early-stage appraisal requires subsurface excellence, environmental baseline work, and transparent stakeholder engagement.



**Figure 1. Oil production trend in SSA (2015-2024).**



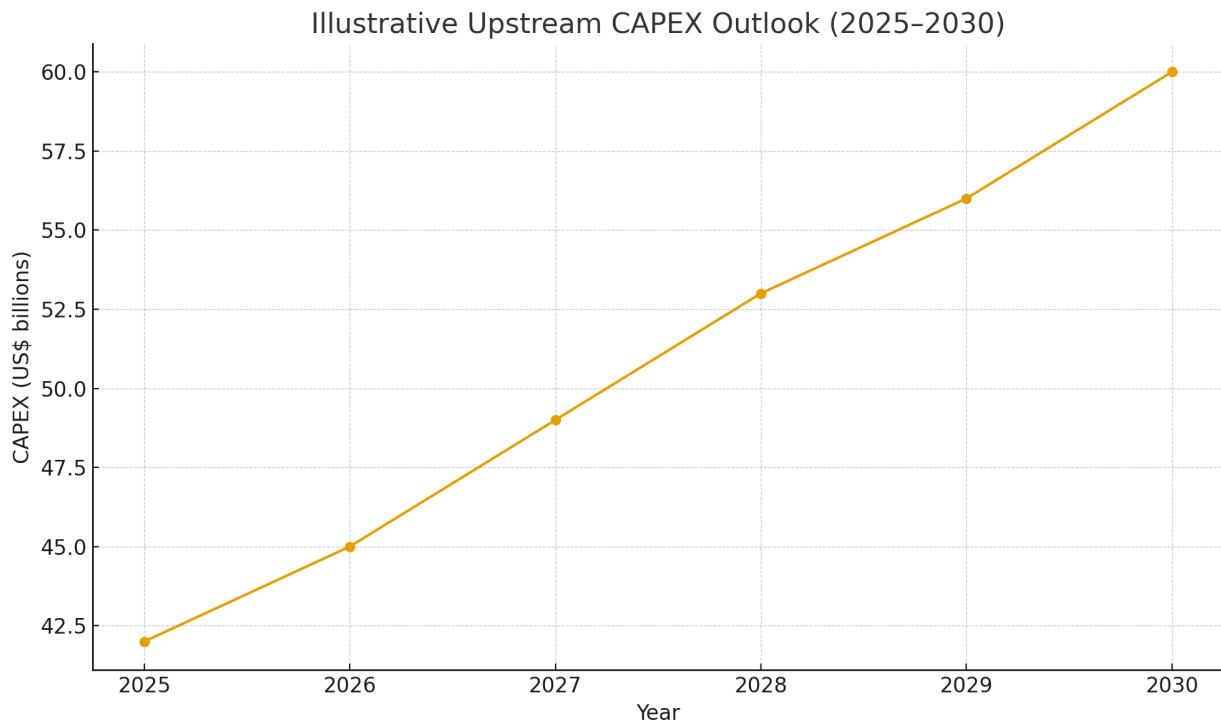
**Figure 2. Gas production trend in SSA (2015–2024).**

## Future Opportunities



- Brownfield value creation: debottlenecking, waterflood/EOR, gas re-injection, and digital surveillance.
- LNG and regional gas: power-sector integration, CNG/LPG for households, and industrial feedstock.
- Frontier exploration: disciplined appraisal, phased developments, and modular facilities.

- Local content & supply chains: fabrication, marine logistics, and service-sector diversification.
- Decarbonisation: flare reduction, methane management, electrification, and CCS pilots.
- Digital transformation: data historians, predictive maintenance, and remote operations.



**Figure 3. Upstream CAPEX outlook to 2030, supporting phased growth.**

### Key Challenges

- Capital competition and project bankability amid global energy transition.
- Security, HSE performance, and environmental assurance across sensitive regions.
- Skills gaps in specialised domains: subsea, flow assurance, LNG, integrity, and project controls.
- Infrastructure and logistics constraints raising opex and schedule risk.
- Policy consistency, fiscal terms, and transparent local content implementation.
- Community relations and social licence, including land access and benefit-sharing.



## Local Content & Workforce Development



Local content policies seek to maximise national participation without compromising safety and reliability. A blended strategy – tailored technical and specialist training programmes, promotion of international perspectives, targeted scholarships, , supervised on-the-job learning, and supplier development—can lift capability while meeting schedule and cost targets.

Illustrative Local Content Employment Mix

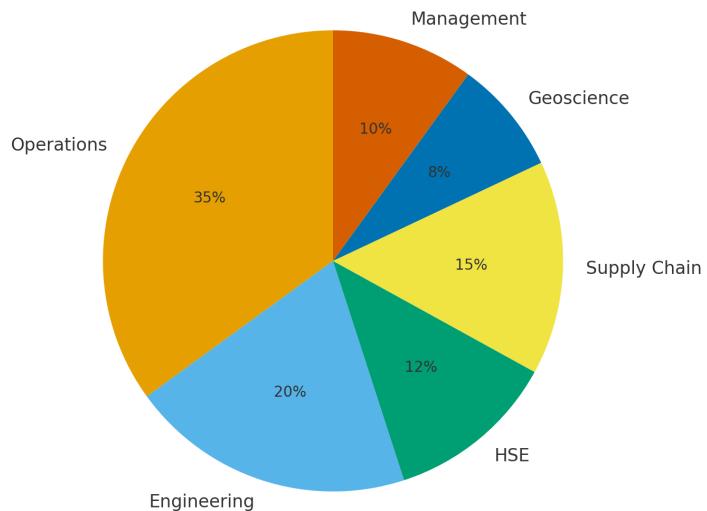


Figure 4. Employment mix for national professionals in O&G.

## Training & Development Needs for SSA Oil & Gas Professionals

Professionals require a layered capability model spanning technical depth, operational excellence, and leadership. Below is a bespoke training curriculum for professionals working in the sub-Saharan oil and gas sector, aligned to current opportunity areas and risk themes.

| Module  | Duration (days) | Assessment        |
|---|-----------------|-------------------|
| <b>HSE &amp; Process Safety Management</b>    | 5               | HAZOP case        |
| <b>Wells Engineering &amp; Well Integrity</b> | 5               | Well barrier plan |

|  |   |                               |
|--|---|-------------------------------|
| <b>Subsea Systems &amp; Flow Assurance</b>           | 5 | Hydrate/slugging study        |
| <b>LNG Operations &amp; Gas Value Chain</b>          | 5 | Mini-LNG startup plan         |
| <b>Production Optimisation &amp; Digital SCADA</b>   | 5 | Telemetry dashboard           |
| <b>Corrosion, Materials &amp; Asset Integrity</b>    | 5 | Integrity risk register       |
| <b>Project Management (FEL-1 to Execute)</b>         | 5 | Stage-gate project charter    |
| <b>Contracts, Procurement &amp; Local Content</b>    | 5 | Bid evaluation & LC plan      |
| <b>ESG, Carbon Measurement &amp; Methane</b>         | 5 | GHG inventory & abatement map |
| <b>Trading, Pricing &amp; Market Fundamentals</b>    | 5 | Cargo economics brief         |
| <b>Leadership for Technical Managers</b>             | 5 | Leadership action plan        |
| <b>Community Engagement &amp; Social Performance</b> | 5 | Stakeholder impact map        |

Delivery approach: in-person learning with simulator time for things like wells/process upsets, structured mentoring, and example capstone projects that deliver workplace value (e.g., flare-reduction plans or corrosion mitigation campaigns).

## Illustrative Case Examples



### Case 1: Brownfield Debottlenecking (West Africa)

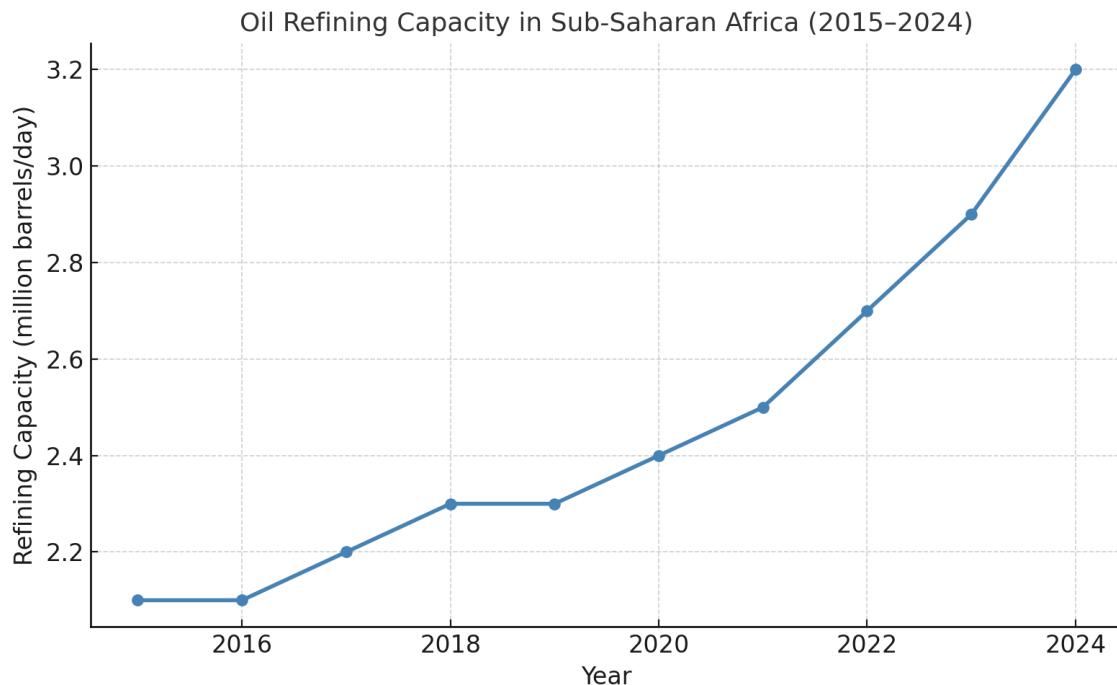
A mature FPSO increased uptime by implementing condition-based maintenance and flow-assurance monitoring. Training focused on vibration analysis, data interpretation, and management of change, producing measurable deferment reduction.

### Case 2: LNG Startup Readiness (East Africa)

Integrated operations and control-room simulations prepared multi-disciplinary teams for commissioning and ramp-up. Training covered start-up sequences, emergency response, and vendor package integration.

### Case 3: Frontier Basin Appraisal (Southern Africa)

Appraisal planning emphasised subsurface uncertainty, stakeholder engagement, and environmental baseline studies. Professionals trained in risk economics and phased facilities to improve FID readiness.



**Figure 5. Oil Refining Capacity of sub-Saharan Africa Over the Last 10 Years.**

### Conclusion

SSA's oil and gas sector can thrive amid transition if it invests in training people as deliberately as in projects.

By pairing disciplined capital with world-class training in HSE, integrity, digital operations, and leadership, the region's professionals can deliver reliable energy, stronger local industries, and durable community benefits.