

## SUBSEA EXPO 2020

# Local Content developments: strategies, benefits, latests progress and Business Opportunities

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**Maputo, 5<sup>th</sup> March 2020**

- Mozambique Oil and Gas Sector
- Projects and Developments
- Investment Opportunities
- Final Remarks

## Explored basins

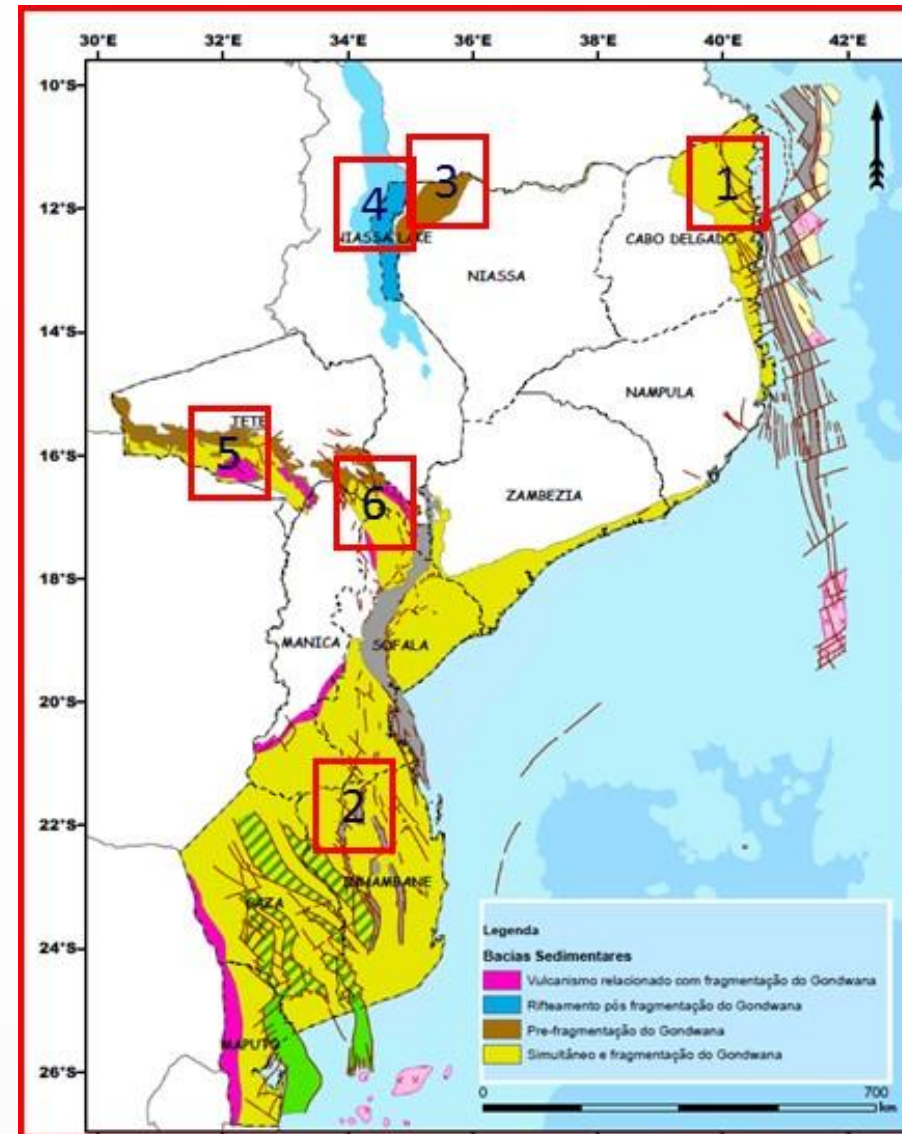
### Passive Continental Margin basins:

- Rovuma Basin (1)
- Mozambique Basin (2)

## Unexplored basins

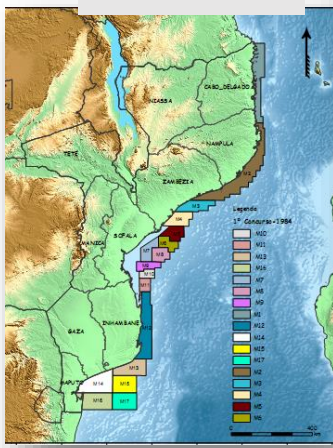
### Graben and Rift Type basins:

- Maniamba Basin (3)
- Lake Niassa Basin (4)
- Lower Zambeze Graben (5)
- Middle Zambeze Basin (6)

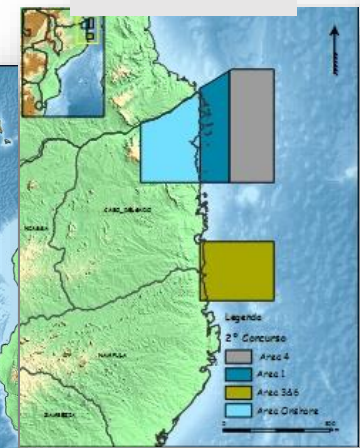


# Bidding rounds

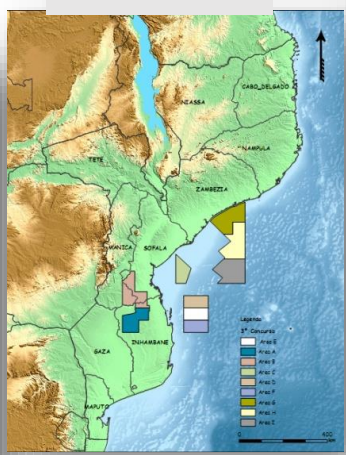
1<sup>st</sup> - 1984



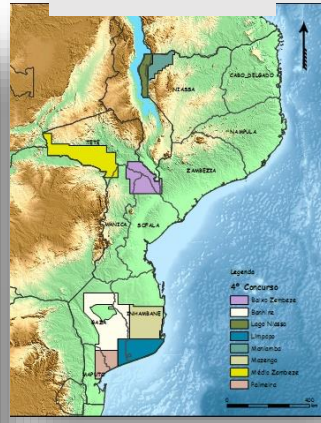
2<sup>nd</sup> - 2005



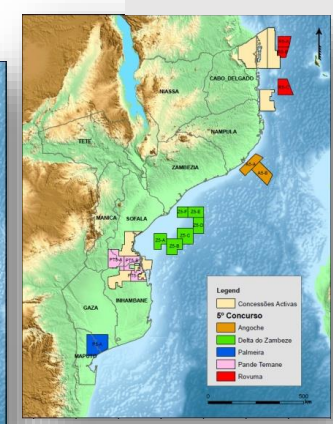
3<sup>rd</sup> - 2007



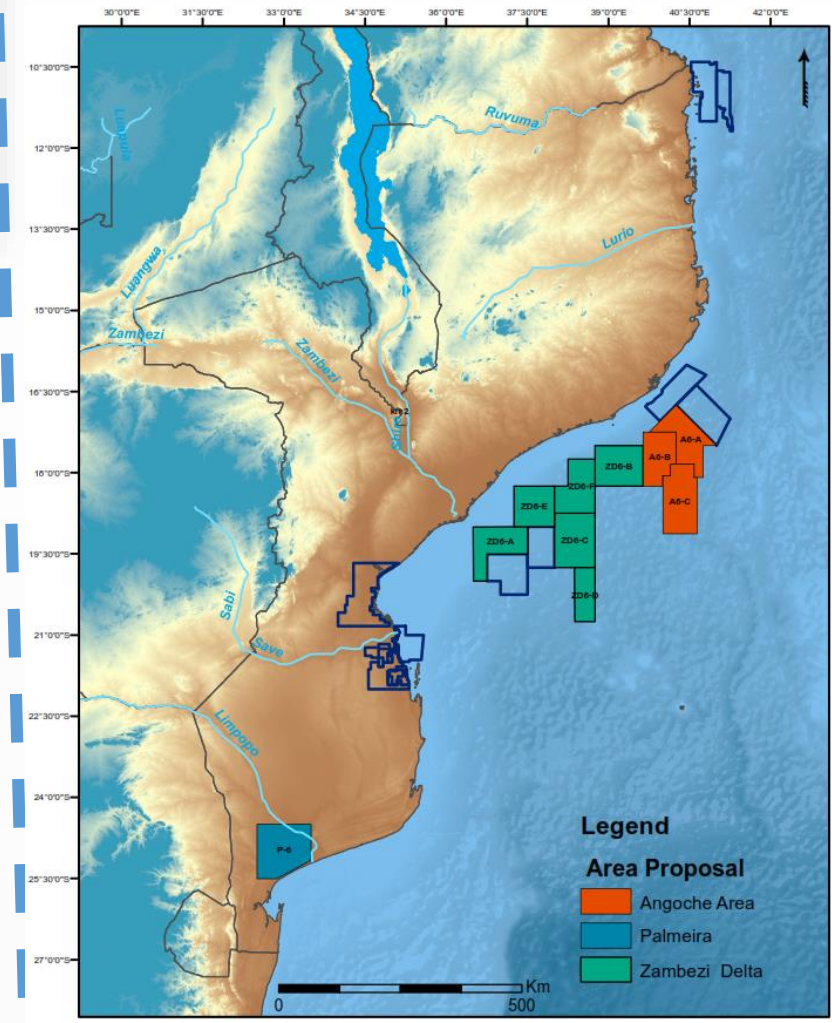
4<sup>th</sup> - 2009



5<sup>th</sup> - 2014



6<sup>th</sup> - 2020

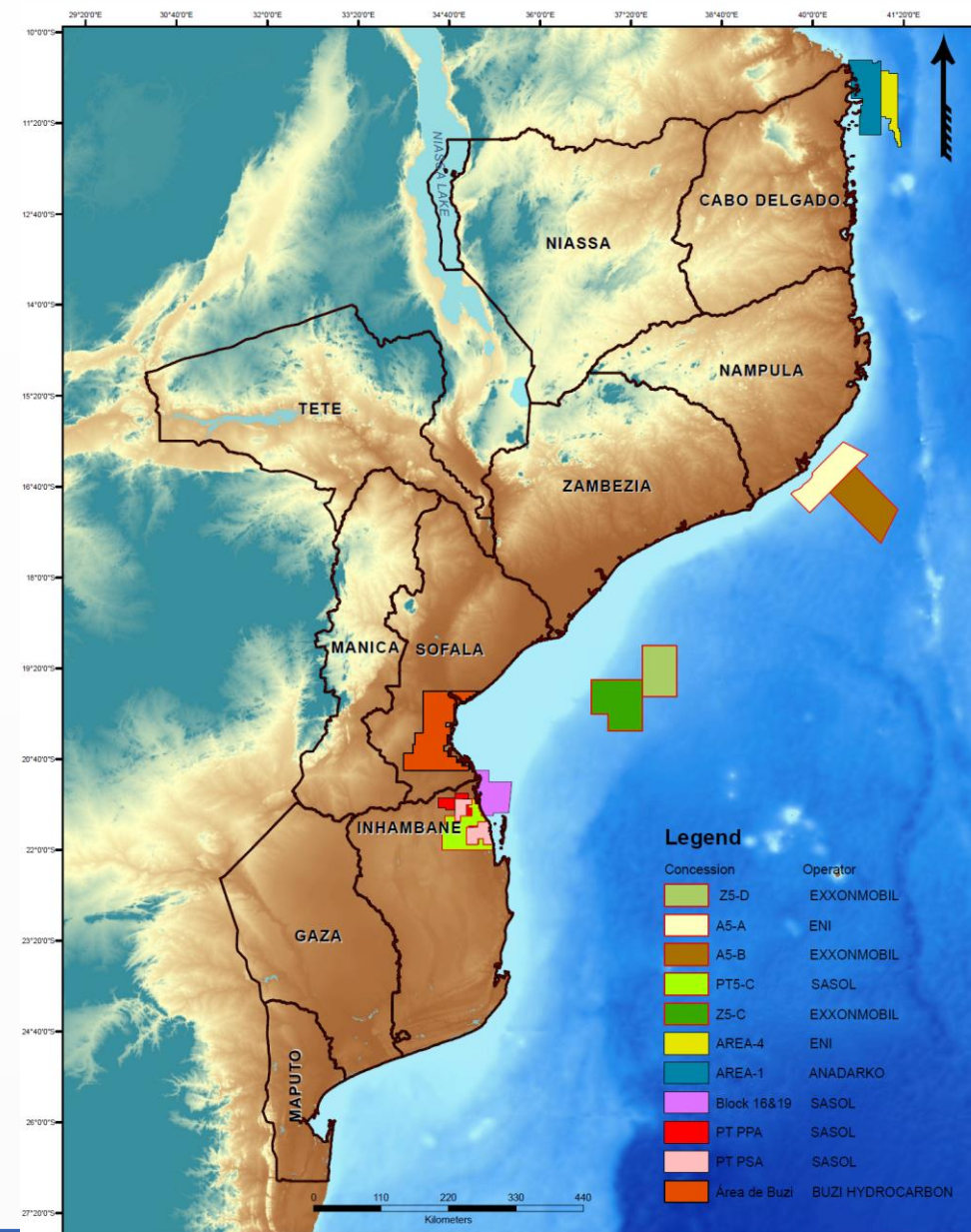


## Next BIDDING ROUND ROADMAP

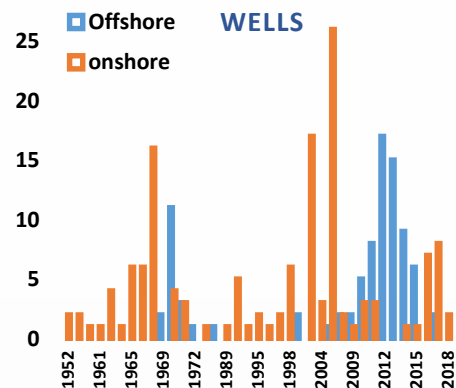
- Revision of Strategy of Concession of Areas
- Nomination Process (2 months)
- Launching of the bidding round
- Bid proposals submission (6 months)
- Bid evaluation (3 months)
- Announcement of Bid evaluation results
- EPCC signature process

# Active Concessions

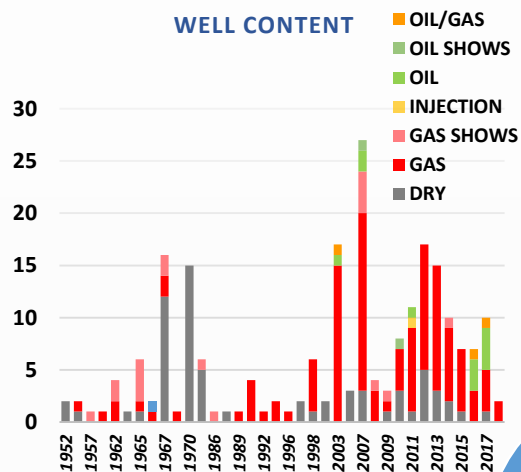
ÁREA 1	
ÁREA 4	
ÁREA A5-A	
Área A5-B	
ÁREA Z5-D	
ÁREA Z5-D	
BLOCO DE BUZI	
PANDE&TEMANE (PPA)	
PANDE&TEMANE (PSA)	
BLOCOS 16&19	
ÁREA PT5-C	



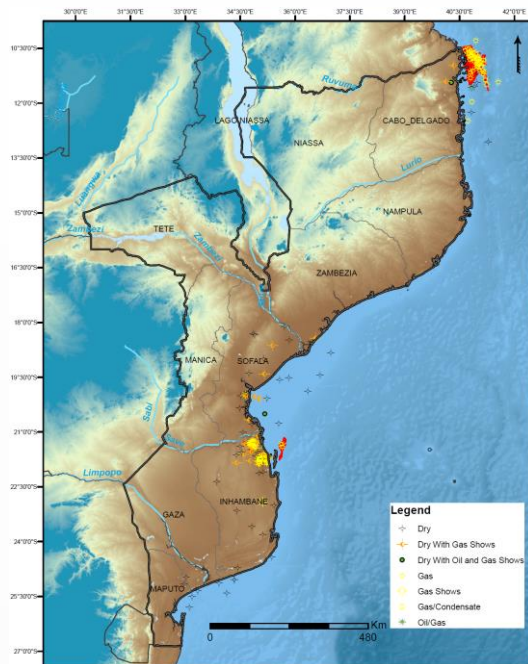
## OFFSHORE VS ONSHORE WELLS



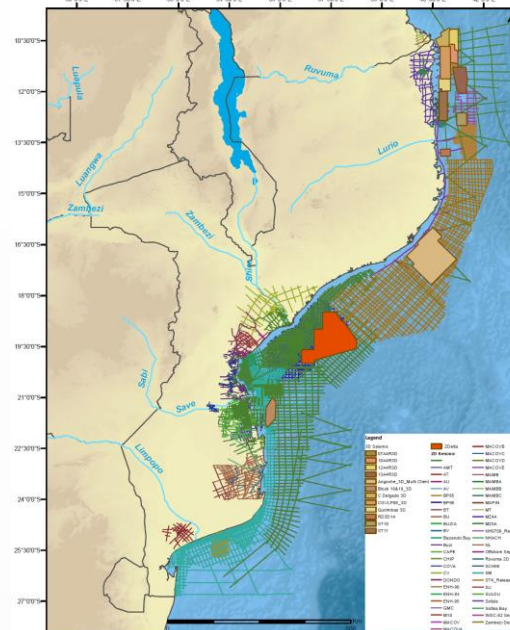
## WELL CONTENT



## WELL DATA



## SEISMIC DATA



## Other Data & Availability:

- Well Data (2,000 – 75,000 USD)
- Grav-Mag Data (5,000 USD)
- 2D & 3D seismic (400\$ per km/linear and 7000\$ km<sup>2</sup>)
- Access through Data Room & Multiclient Contract Agreement (CGG, WesternGeco, Spectrum)

Total  
223  
wells

141  
Onshore

82  
Offshore

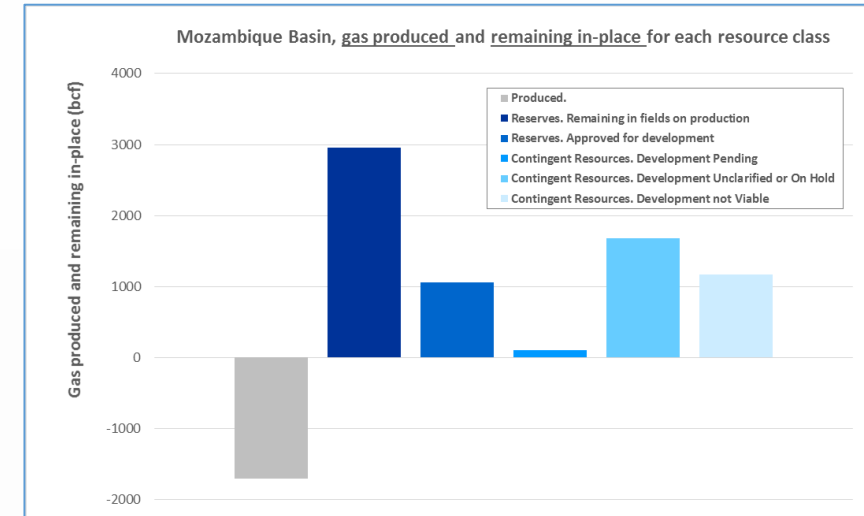
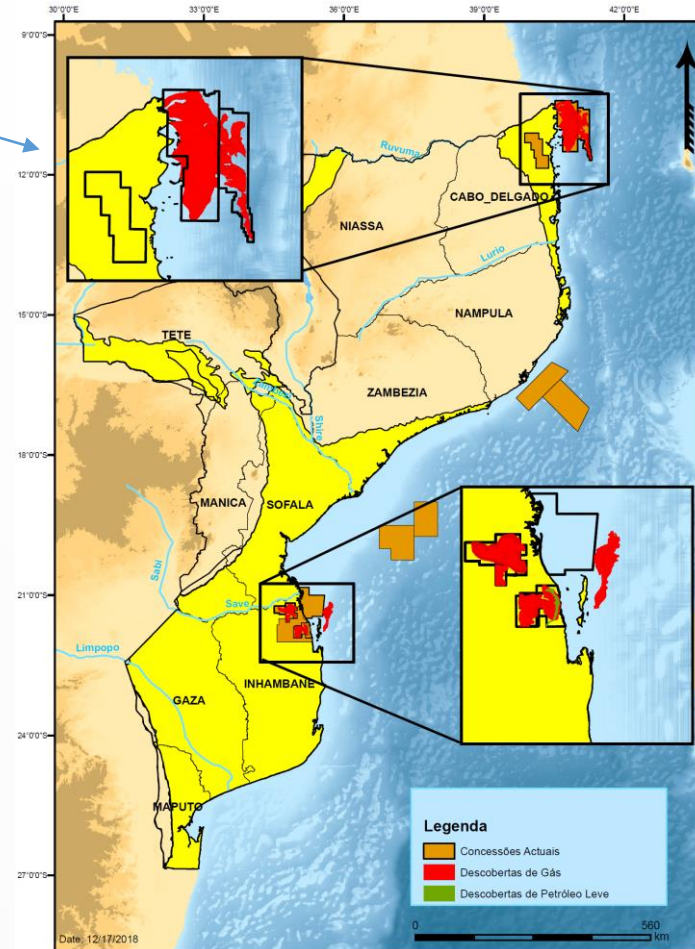
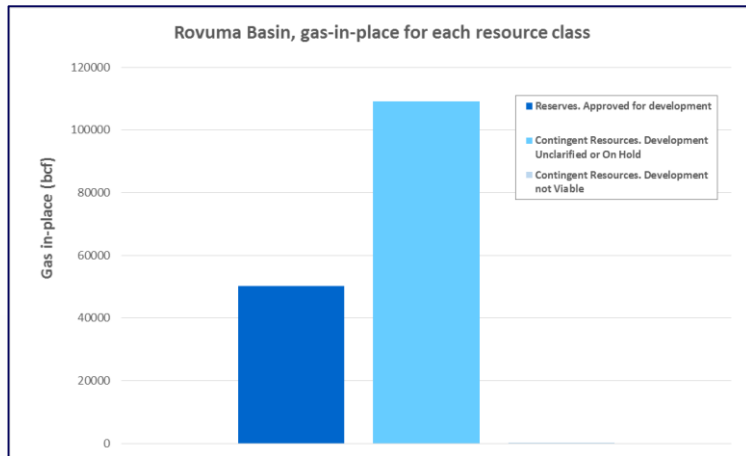
Seismic  
data

70,526 km<sup>2</sup> of  
exclusive 3D

248,000 km of  
2D

## Rovuma Basin

- 165Tcf gas *in situ*
- 114 Tcf Recoverable



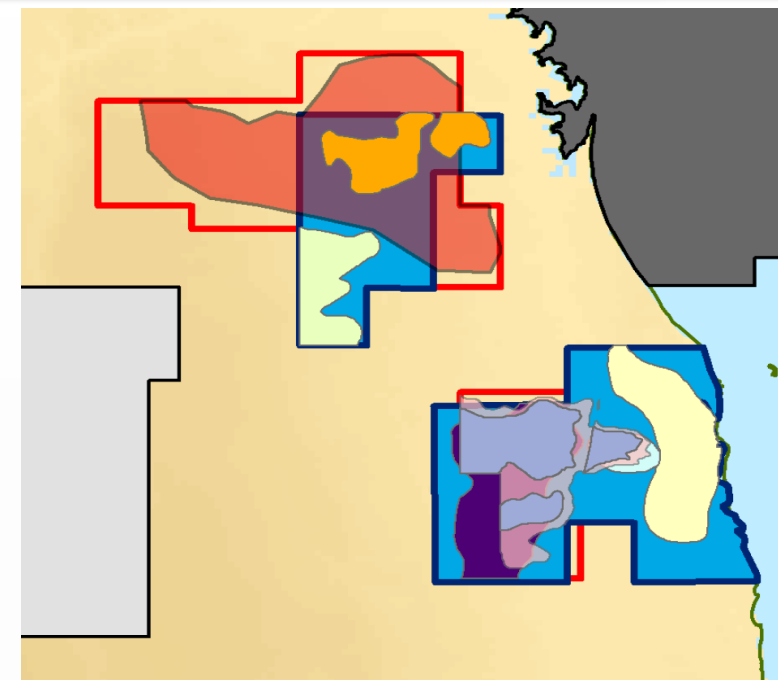
## Mozambique Basin

- 8.1Tcf gas *in situ*
- 6Tcf recoverable
- 0.8MMbbl oil *in situ*
- 0.35MMbbl Oil recoverable

# Projects & Development



# MOZAMBIQUE BASIN – DEVELOPMENT PROJECTS



## Production started in 2004 from Pande/Temane Fields Capacity

- CPF: 197 MGJ/a
- ROMPCO: 212 MGJ/a @ 26"
- MGC: 22 MGJ/a @ 8"

### ➤ Use of Natural gas in Mozambique:

- Power generation, Fuel to industries (CNG - Compressed natural gas)
- Commercial and domestic use - Gas distribution Project

## Temane – Secunda Pipeline

## Production Sharing Agreement (PSA)

- Contract signed in 2000
- Approved Plan of Development for Inhassoro and Temane fields in January 2016;
- Expected to produce
  - Light oil;
  - Natural Gas and;
  - LPG



## CORAL FIELD

- PoD approved February 2016
- FLNG 3,4 MTA
- FID was reached 1<sup>st</sup> June 17
- Construction of FLNG has started in March 2018 – 60% Executed
- Expected drilling of the development wells to start in 3Q 2019
- Expected first production in 2Q 2022
- 8 billions USD of investment

## GOLFINHO/ATUM FIELD

- PoD approved in February 2018
- 2 LNG trains 12,88 MTA
- 400 MMSCFD for Domestic Gas for the production of: Fertilizers – Yara International, ■ GTL – Shell, ■ Energy – GL Africa
- FID reached on 18<sup>th</sup> June, 2019
- Expected first production in 2025
- 23 billions USD of investment (2.5 billion spent local market)

## UNITIZED FIELDS

- Unitization agreement approved in May 2019
- 2 LNG trains 15,2 MTA
- PoD approved in May 2019, for the Initial Development of Prosperidade-Mamba Fields Complex,
- 500 MMSCFD for the Domestic Gas
- Initial FID 15<sup>TH</sup> Oct 2016 FID Final expected in 1Q 2020
- 23,6 billions USD of investment (3 billion spent local market)

# LOCAL CONTENT - Definitions

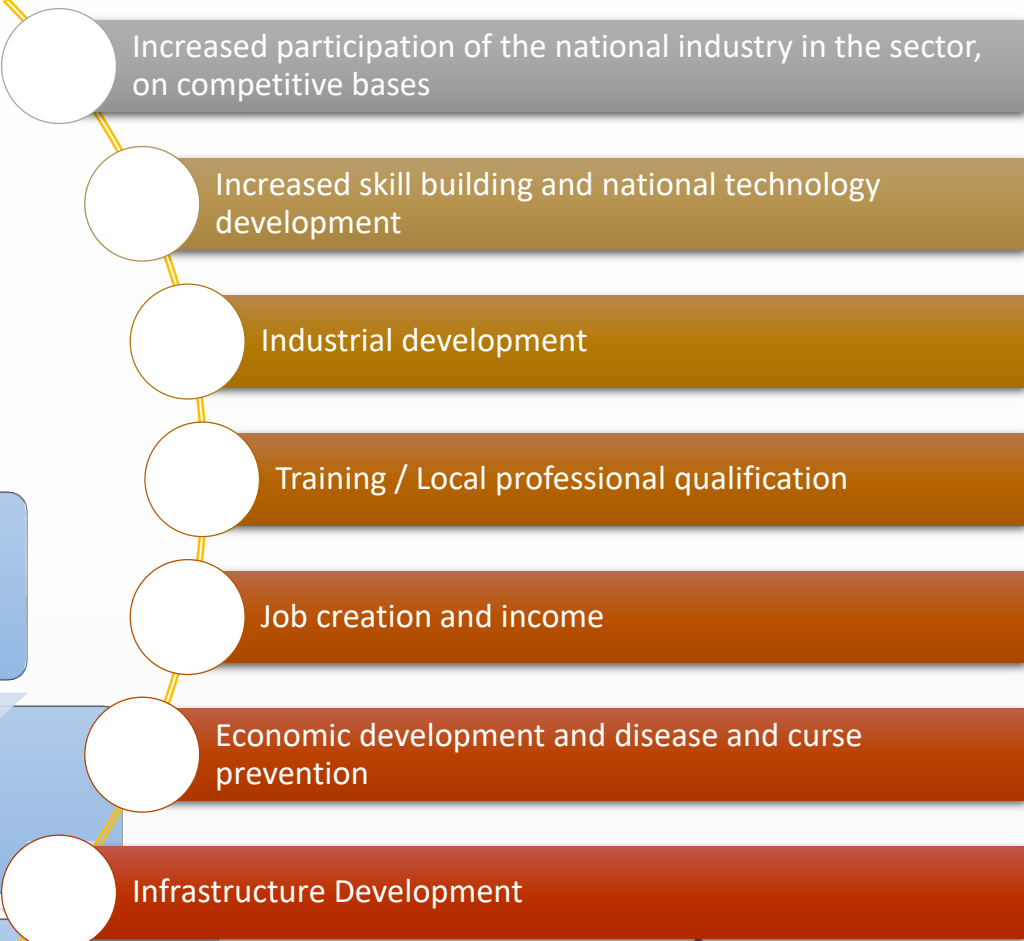
“...Percentage of a product whose added value derives from the internal market (within the country)”

The use of internally manufactured goods and services, incorporating national-capital production factors, raw materials and labour. (Local Content Law draft)

Is the purchase of goods or services from a local supplier” (Local procurement IFC Guide)

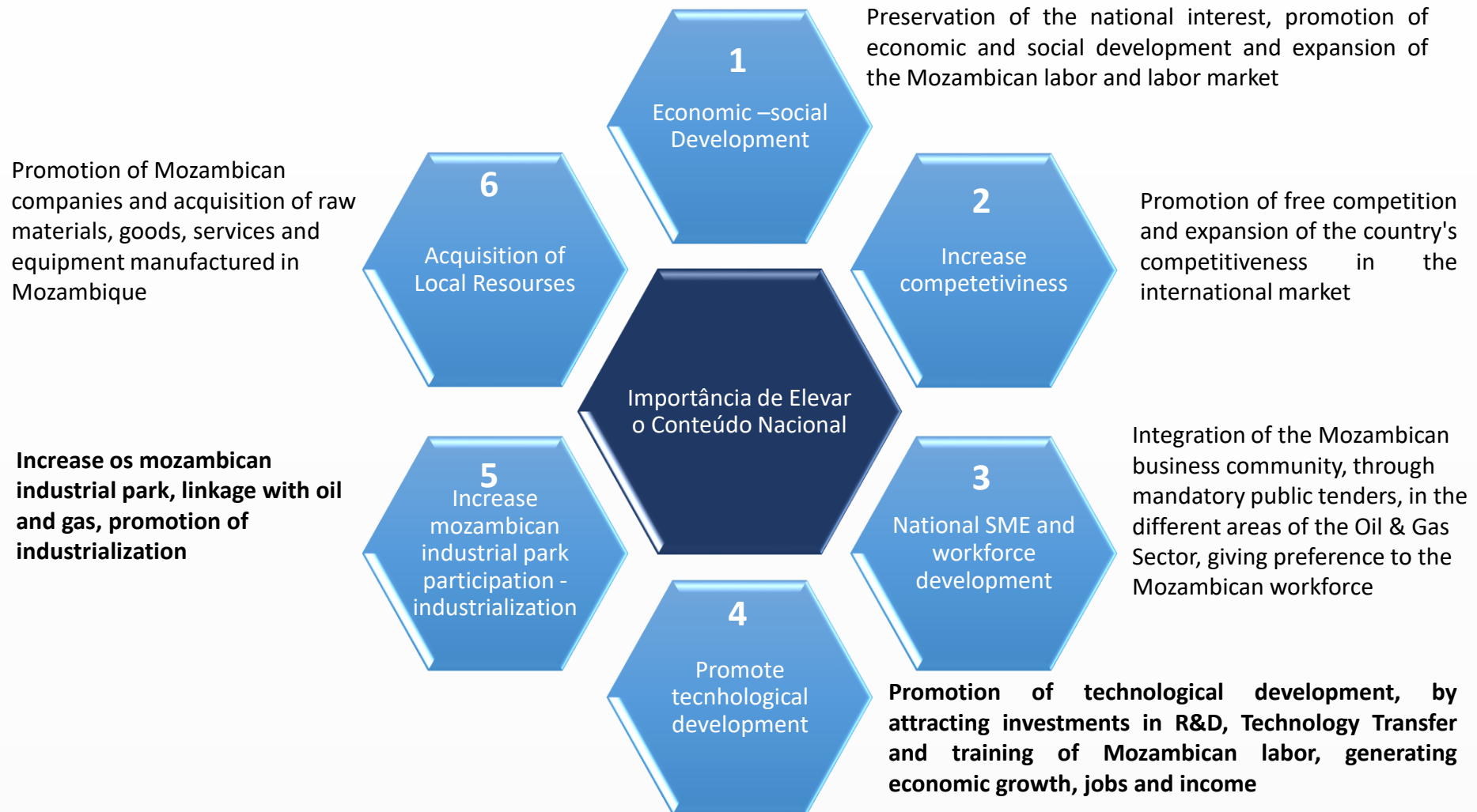
Goods and services that a particular company acquires from local suppliers for the its regular operation" (ANP)

Value created by Industrial development by creating capabilities and promoting local companies to participate in industry operations and training local resources for involvement in industry companies. (Accenture)



# Importance/ benefit of Local Content

National Content is important for the Oil & Gas Sector and for Mozambique:



# Main stakeholders involved



✓ Ministry: MIREME

*Anchor representative in the National Content development process. Responsible for the Petroleum Sector policy*



✓ Regulator: INP

*Regulatory agent that plans and executes the actions implemented to expand the National Content. It also monitors and controls the result.*



- ✓ Institutions : MIC, MITESS, MCTESTP
- ✓ Outros: (ex: Bancos de Fomento e Bancos Públicos)



✓ NOCs: ENH



✓ IOCs ((Sasol, AMA1, MRV, ERB, etc)



✓ Supply Industry : CTA (Associações de Classe



✓ SMEs Representants (Pequenas e micro empresas)



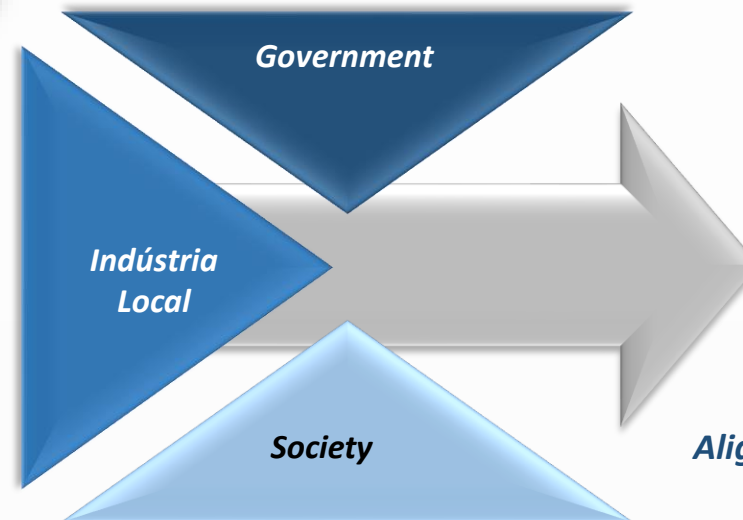
✓ Education: Universidades, Escolas



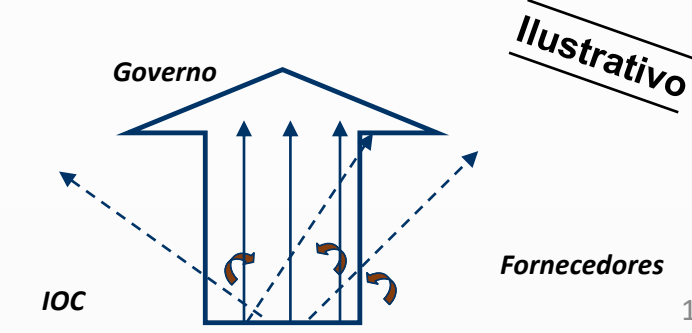
✓ Technology: RD Centers



✓ Workforce



*Alignment of stakeholders interests (pontos comuns)*

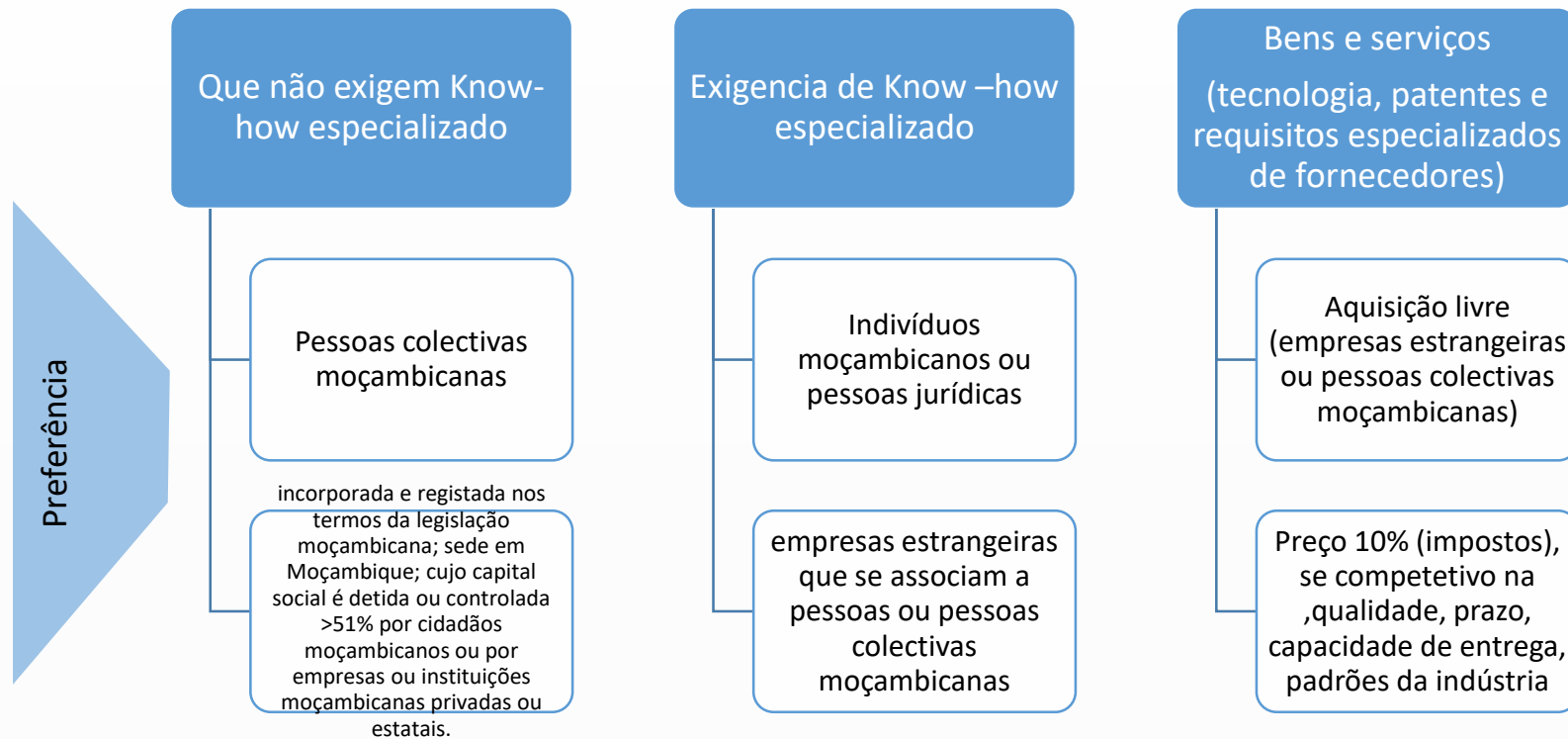


women entrepreneurs in Mozambique continue to experience challenges:

- knowledge of legal obligations, limited accounting and management skills, lack of collateral, and lack of confidence in negotiating access to finance with banks and other financial institutions as
- number of studies which have shown a link between gender inequality and poor economic growth
  - Such gender related disparities need to be addressed not as a human rights issue but as a response to the issues raised in a (Deinger & Squire 1998).
- Companies have different approaches to increase women participation in oil and Gas :
  - ✓ Companies policies on diversity and gender
  - ✓ Privileges in bids for companies led by women ( additional points on technical evaluation)
  - ✓ Supplier development program for women (80 companies)
  - ✓ Privileges on CSR Projects that involves women

## ❖ Plano de Conteúdo Local e Oportunidades de Negócios – alinhado com Decreto lei

### Categorias gerais de produtos e serviços



### Planos de Conteúdo Local

- ✓ Recruitment training of national workforce;
- ✓ Plan the hiring of national resources and the relevant organizational position;
- ✓ Plan for the acquisition of Goods / Materials and Services;
- ✓ Plan for the involvement of local subcontractors;
- ✓ Supplier Development (supply chain)
- ✓ Partnerships and collaboration with National Institutions
- ✓ Technology transfer
- ✓ specific requirements in terms of activities to be carried out in the country (such as minimum number of national resources to be trained)
- ✓ Engagement plan for local communities;

# Actions to maximize Local Content

## Acções para Maximização do Conteúdo Local (cont.)

### **a. Fornecimento de Bens e Serviços**

- ✓ Breakdown of opportunity packages into smaller packages;
- ✓ Ringfence opportunities for nationals
- ✓ Linkage of maintenance and sustainable economic sectors (banking, financial service insurance, agriculture, HR, logistics, manufacture & fabrication -civil construction, mechanical piping and engineering human resources) with concessionaires, contractors and subcontractors;
- ✓ Harmonization of the different proposals submitted for the Implementation of Procol - a program to disseminate and support the maximization of local opportunities.

### **b. Knowledge transfer, technology institutional cooperation**

- ✓ Compilation of the necessary skills for the oil sector and sharing with relevant entities;
- ✓ Support in the identification of financiers for the analysis of gap analysis for oil and gas competence;
- ✓ Actions to promote and stimulate the formation of partnerships on a discriminatory basis with educational, technical-vocational, governmental institutions



# Actions to maximize local content (2)

## Acções para Maximização do Conteúdo Local (cont.)

### **c. Codes of Practice**

- ✓ Standardization of guidelines for good procurement practices in the industry, which will establish practical measures for buyers and suppliers to overcome obstacles that prevent local companies from obtaining contracts;
- ✓ Adherence to the Code - large buyers, trade associations, supplier representatives and government agencies;
- ✓ Code content will be developed through collaboration across the industry, complying with and aligned with relevant legislation applied in industry and in Mozambique
- ✓ Different platforms for registration and qualification of suppliers, which brings constraints and adds material, financial and administrative efforts to the process, etc.

### **d. Joint Industry Supplier Information System:**

- ✓ Establishment of an on-line tender and bidding system - Synergy and updating of information on the capacity of suppliers, bringing a better view of the market for buyers and suppliers to provide goods and services, Transparency, greater access, cost reduction;

### **e. Local Content Monitoring**

- ✓ Identification of performance indicators (labor, training, supply of goods and services, awarded values, etc.)
- ✓ Make corrections during the implementation of the Plans
- ✓ Means of Monitoring
  - Semiannual report, annual
  - Quarterly progress meeting
  - Inspection, audit

## a. Acções previstas pelo INP para colmatar este constrangimento

MIREME/INP

- Trabalho em colaboração com as empresas para desenvolvimento de programas de apoio a certificação
- Iniciativas para criação de fundos de desenvolvimento para financiamento de PMEs para desenvolvimentos de programas de certificação
- Abertura de facilidades por parte das contratadas que permitam que as PME/fornecedores que possuam outros requisitos satisfatórios possam ser qualificadas:
  - Criação de joint ventures - que dois ou mais fornecedores tenham a opção de combinar os seus conhecimentos em um esforço para responder com sucesso às oportunidades de contratação, onde principais fornecedores receberem o benefício do histórico do desempenho passado, incluindo a certificação;
  - Aceitação de processos, sistemas e/ou procedimento de gestão aceitáveis (hse, ambiental ou qualidade) em implementação pelos fornecedores que garantam a execução dos serviços de acordo com os padrões aceitáveis da indústria;

## b. Programas desenvolvidos pelas operadoras

Apoio no reforço da capacidade do INNOQ para certificar mais fornecedores nacionais

Emp. Pande - Temane

- Fundo de desenvolvimento para PME
- 100 PME Abrangidas
- Registradas cerca 1050 empresas na plataforma, das quais cerca de 350 de propriedade moçambicana

Projecto Coral FLNG

- Programa desenvolvimento Empresarial parceria StandardBank
- Projecto Piloto 2 anos
- 50 empresas beneficiarias

Projecto Golfinho-Atum

- Programa p certificação de 40 empresas
- 65% valor das adjudicações para empresas registradas em MOÇ e de propriedade moçambicana
- Workshop de treinamento de requisitos e divulgação de oportunidades:
- 50 empresas Cabo Delgado (Conformidade Legal)
- 87 empresas sobre HSE
- 65 empresas sobre políticas, procedimentos e modelos de cursos

Projecto Rovuma LNGp

- Local supplier development program in progress
- Supplier registration Platform
- Establishment of EDC
- In preparation for the dissemination of opportunities seminar

# MAIN OPPORTUNITIES – GAS & LNG PROJECTS

- Casing
- Subsea services
- Ship/ vessel repairs
- Customized construction in industry
- Drilling Services
- Painting and insulation

## Industrial services



- Subsea construction
- Cement
- Machinery
- Subsea equipment's
- Services and tools
- Fabrication and engineering
- Supply of building equipment's and material

## Construction and Engineering



- Cabotage
- Maritime operators
- Air Transport
- Freight forwarder
- Customs brokers
- Heavy cargo transport
- Heavy lift transport
- Clearing and forwarding

## Logistics



- Towage, Pilotage, Mooring and marine maintenance services.
- Berthing and un-berthing operations
- Emergency Response/ Evacuation
- Pollution Control
- Fire Fighting

## LNG-Carriers Services



- subsea Intervention (Inspection, Maintenance, and Repair)
- Supply from Pemba to FLNG/Riggs Chemicals & Fuel;
- Spare Parts;
- Lubricants;
- Catering

## Supply vessels services



- Maintains
- Catering
- Recruitment/ training
- Real estates management Accommodation
- Environmental services
- Supply of PPE, Power tools, equipment for electrical works

## General services



- Supplier and maintained (electric engines, special paints,
- naval carpentry ,
- fiber services,
- industrial assembly
- shipyards, maintained and repairs of standby boats

## Naval industry



- Construction material analysis
- Labor, equipment
- Surface tests, x-ray, etc
- Geotechnical tests and studies
- Geochemical analysis

## Lab Analysis services



- Catering services
- Communication and IT
- Camp supplies
- Construction of houses, Site roads, access
- fencing,
- street lighting, painting

## Camp construction



- GTL Project (Shell)
- Fertilizer and petrochemical (YARA)
- Power Generation (GL Energy)
- Condensates refinery
- Retail Network (petrol, CNG, LNG, LPG
- Oil and gas derivate (ethylene, naphtha – PP,PVC, PS, PE, PET

## Downstream projects



# MAIN CONTRACTORS

Operator - MRV

Coral South FLNG Project

- SPE – Coral FLNG
- EPCIC –TSJ (TechnipFMC-JGC- Samsung Heavy Industries)
- *GIIP of 15.67 TCF*
- *FLNG- Floating LNG Platform, 3,37 MTPA*
- *6 wells, Subsea Production Systems , SURF*

Operator - TOTAL

Mozambique LNG Project

- CCS JV (Saipem, McDermott,Chyoda) , Offshore (Van Oord- nTechnip FMC)
- GIIP of 31.3 TCF, Onshore liquefaction Plant
- 2 trains (~12 MTPA), potential for 6
- 20 Production wells (7"), 03 subsea pipeline

Operator  
Upstream – ERB –Eni  
Rovuma Basin  
Midstream - ExxonMobil

Rovuma LNG Project

- JFT JV (JGC –Fluor – TechnipFMC)
- GIIP of 31.3 TCF, Onshore liquefaction Plant
- 2 trains (~15.2 MTPA), potential for 6
- 24 wells (16 initial developments), 03 subsea pipeline

***“Regulando a Exploração Sustentável dos Recursos Petrolíferos”***



<b>Projecto/ Empresa</b>	<b>Plataforma de registo</b>
<b>1. Pande&amp;Temane e Inhassoro - Sasol</b>	ARIBA <a href="https://service.ariba.com/">https://service.ariba.com/</a>
<b>2. Coral Sul – Eni Rovuma Basin</b>	<a href="https://esupplier.eni.com/PFU_en_US/home.page">https://esupplier.eni.com/PFU_en_US/home.page</a>
<b>3. Golfinho-Atum - TOTAL</b>	Acquilles <a href="http://www.mzlng.com/Opportunities/Suppliers/">http://www.mzlng.com/Opportunities/Suppliers/</a>
<b>4. Rovuma LNG - MRV</b>	DAI <a href="https://mz.rovumalngsrp.com/#/home">https://mz.rovumalngsrp.com/#/home</a>
<b>5. Exxon Mobil</b>	<a href="https://mz.rovumalngsrp.com/#/home">https://mz.rovumalngsrp.com/#/home</a>



*“Regulating the Sustainable Exploration of Petroleum Resources”*



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