# CORAL SOUTH PROJECT FIRST LNG CARGO November 2022

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# Mission

We are an energy company.

**13 15** We concretely support a just energy transition,

with the objective of preserving our planet

7 12 and promoting an efficient and sustainable access to energy for all.

 Our work is based on passion and innovation, on our unique strengths and skills,

**5 10** on the equal dignity of each person,

recognizing diversity as a key value for human development, on the responsibility, integrity and transparency of our actions.

We believe in the value of long-term partnerships with the Countries and communities where we operate, bringing long-lasting prosperity for all.

The mission represents more explicitly the Eni's path to face the global challenges, contributing to achieve the SDGs determined by the UN in order to clearly address the actions to be implemented by all the involved players.

#### Global goals for a sustainable development

The 2030 Agenda for Sustainable Development, presented in September 2015, identifies the 17 Sustainable Development Goals (SDGs) which represent the common targets of sustainable development on the current complex social problems. These goals are an important reference for the international community and Eni in managing activities in those Countries in which it operates.



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## **CORAL SOUTH PROJECT**

Coral South is the first project approved by the Area 4 Partners for developing gas resources discovered in the Rovuma Basin, off Mozambique's coast.

This project encompasses all the elements of technological innovation, exploratory talent, time to market, international collaboration, training and sustainability that are characteristic of Eni, Upstream Delegated Operator of Area 4.

The Coral Sul Floating LNG has safely achieved the introduction of hydrocarbons and achieved its first LNG cargo, adding Mozambique to the world's LNG-producing countries.

### **AREA 4 PARTNERSHIP**

Eni leads the Coral South Project and all upstream operations in Area 4, through its wholly-owned affiliate Eni Rovuma Basin (ERB), holding a 25% indirect participation interest in the Area 4 JV, with the other participants being ExxonMobil (25%), CNPC (20%), ENH (10%), Galp Energia (10%) and Kogas (10%).





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#### MESSAGE FROM GUIDO BRUSCO COO NATURAL RESOURCES, ENI



Eni is proud to celebrate the start of LNG export from Mozambique. This is a pivotal milestone in a project that has seen a team of global partners put their skills, knowledge, leadership and resources at the service of the country's vast, untapped gas resources. It all began with Eni's discovery of world-class gas reserves in the Ro-

vuma basin, and with the discovery of the Coral reservoir in 2012. New partners joined us along the way and in 2017 Eni, ENH, ExxonMobil, CNPC, Galp and Kogas reached Coral South Project Final Investment Decision, launching the implementation phase. Construction of the Coral Sul FLNG began in 2018 in South Korea; sail away took place in November 2021 and first LNG drop achieved beginning of October 2022, barely 5 years from FID, as originally planned and despite the very challenging conditions imposed by the pandemic. A remarkable result, made possible thanks to Eni's distinctive phased and parallelized approach, a mature design and a very effective execution planning. But the game changer was – alongside with the support of the Government of Mozambique – the very strong sense of common purpose and shared success across all partners and stakeholders, our people and contractors, leading to extraordinary commitment and remarkable resilience.

Parallel to the construction of Coral Sul FLNG, a vast training program directly involved over 200 young Mozambicans, providing state-of-the-art skills and international hands-on experience. In addition, more than 1000 Mozambicans were trained through our contractors. This is part of a broader set of activities, fully supported by the Government of Mozambique, designed to maximize local content and ensure that Mozambican companies and professionals play an active role in the project development, successfully leading to more than 1400 Mozambicans now working in the context of the Coral South Project.

Shared goals and a shared commitment are the foundations of the strong, mutually beneficial relationship that binds us with Mozambique's stakeholders, and will be the cornerstone of future projects.



### MESSAGE FROM MINISTER OF NATURAL RESOURCES AND ENERGY, CARLOS ZACARIAS



The Coral South Project starts LNG production and export, a milestone in the accomplishments of the Government of Mozambique.

The Plan of Development was approved in 2016 and today we proudly witness the export of the first shipment of Liquefied Natural

Gas (LNG) from the Rovuma Basin. The project was carried out within its timeline and according to the highest international safety parameters and standards.

This demonstrates the multifaceted viability and attractiveness of Mozambique as a major investment destination and the capacity to implement large-scale projects. Mozambique begins a new era as an LNG supplier in the global market. We reaffirm the Government's commitment on the development of natural gas projects in this time of rising demand for green energy.

This project will contribute significantly towards achieving the growth, transformation and development objectives established by the Government of Mozambique. Reaching this stage would not have been possible without the engagement and commitment of the project Delegated Operator, Eni, and its partners ExxonMobil, CNPC, Galp, Kogas and ENH, as well as all other stakeholders in the project to whom I wish to express my sincere thanks.

Profound gratitude to His Excellency the President of the Republic for his leadership, an essential factor in the success achieved by this economic project.

Thanks to everyone.





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MAIN CONTRUCTION YARDS - TURRET: KEPPEL, SINGAPORE - FLNG: SHI, GEOJE, SOUTH KOREA

UPSTREAM OPERATIONS HUB IN MOZAMBIQUE



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CORAL SOUTH PROJECT - FIRST LNG CARGO

## **CORAL SUL FLNG**

The construction of the Coral Sul FLNG facility started in 2018 in the Samsung Heavy Industries shipyard in South Korea, and integrates equipment fabricated in several locations around the world.

In parallel to the FLNG construction in South Korea, significant activities were undertaken in Mozambique, with the support of the Mozambican authorities, including the ultra-deep water drilling and completion campaign (2,000m water depth), that involved the highest technological and operational skills.

Coral Sul FLNG construction activities were



completed as per the plan in 38 months, with the FLNG Sail Away from South Korea to Mozambique in November 2021.

- → Coral Sul FLNG is the first floating LNG facility in ultra deep water
- → The FLNG vessel is 432 meters long by 66 meters wide
- → Weighs around 220,000 tons
- $\rightarrow$  Living Quarters have a capacity to

accommodate up to 350 people in its eight-story living quarter module

- → Will bring into production 450 billion cubic meters of gas from the giant Coral reservoir, located offshore in the Rovuma Basin
- → Gas liquefaction capacity of 3.4 million tons per annum (MTPA)



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CORAL SOUTH PROJECT - FIRST LNG CARGO

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## MILESTONES

#### 2012

Natural gas discovery in the Coral 1 exploration prospect, Area 4, offshore Mozambique

#### 2017

June, Final Investment Decision Ceremony

#### 2018

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September, Coral Sul FLNG 1st Steel Cut

#### 2019

June, Hull Keel Laying



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## 2021

#### November, Coral Sul FLNG Sail-away

January, Hull Launch

### 2022

January, Arrival of Coral Sul FLNG in Mozambique

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March, Completion of Coral Sul FLNG mooring activities June, Introduction of Hydrocarbons

October, Production of LNG First Drop November 2022, first LNG cargo

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### MOORING, HOOK UP AND OFFSHORE COMMISSIONING

After a journey of around 12000 km, Coral Sul FLNG arrived in Mozambican waters early January where it will produce LNG for the next 25 years.

Upon arrival, the installation campaign started including mooring, SURF hook-up and commissioning operations at a water depth of around 2,000 meters.

Upon completion of the tow and arrival in country, the Coral Sul has been controlled by a team of station-keeping tugs holding the facility in position of a correct heading, for the mooring hook-up works to start. The turret has been prepared on board FLNG and the 20 mooring lines have been recovered, transferred to FLNG, pulled-in and tensioned on three rounds of tensioning activities. Mooring operations were completed on 4 March by means of 20 mooring lines with a total weight of 9,000 tons.

Subsea, Umbilicals, Risers and Flowlines (SURF) system were then hooked up and the activity has been completed in May 2022. While the works have successfully been completed, the challenge was to achieve a safe and timely completion of the FLNG commissioning which started on time.

Commissioning operations offshore were progressed, including all utilities such as sea water lift pumps, hot oil pumps, MEG circulation system, gas turbine and compressors, and defrosting components.



### **START-UP AND OPERATIONS**

After completion of the offshore commissioning activities, on 18 June 2022, first hydrocarbons have been safely and timely introduced into the Coral Sul FLNG.

The preparation activities continued with the start-up of the "warm section", which includes the Acid Gas Removal (AGRU), dehydration and mercury removal units, and of the various Plant utilities including the power generation system. In parallel, all the six development wells were successfully tested and commissioned, reaching steady gas production and confirming the excellent performances anticipated during the drilling campaign. The activities continued with the start-up of the "cold section", leading to produce the first drop of LNG on 2 October 2022 and to achieve the first LNG cargo in November, finally bringing Mozambique into the list of LNG-producing countries.



### WORKFORCE DEVELOPMENT

Eni and its Area 4 partners are fully committed to the development of local content and, through specific programs, to create opportunities for young Mozambicans to become part of the energy sector workforce, generating a sustainable impact for the country and for the company, and we are equally dedicated to improve the capabilities of Mozambican SMEs, to allow them to participate more actively in the economic development of the country.

"Programa 200", initiated in 2012, is a long-term training program for Mozambican technical profiles in various professional areas related to the hydrocarbon exploration and production sector. The project consisted of several modules that include:

- $\rightarrow$  Oil & Gas and HSE Training
- → Specific technical training
- → Competence Management System to map and evaluate skills development
- → internships (on-the-job training)
- → Language support through an English course

The program was completed in 2021 where 204 young Mozambicans had the opportunity to gain experience in Italy, the UK, Indonesia, Congo, South Korea, South Africa and Tunisia. Trainees learned about Drilling, Production, G&G, Reservoir, Operation, Marine, HSE, HR, ICT, Legal, Engineering and Medical divisions.

The group attended theoretical and practical classes in Mozambique, at our offices and facilities abroad, and on the Coral Sul FLNG in South Korea, learning the basics of each discipline and improving their ability to work independently. During the program, some of them also had the opportunity to take a Master's course abroad (the MEDEA Master's, HSE and Integrated Geoscience, Engineering and Geology).

Currently more than 300 local resources are directly employed by ERB and Coral FLNG, with more than 1,200 working for their contractors and subcontractors. More are still expected to be recruited and trained, in order to foster even further competence and presence of nationals in the project.



### DEVELOPMENT OF LOCAL SUPPLIES AND SMES

Eni Rovuma Basin, on behalf of the Area 4 Partners and in partnership with Standard Bank Business Incubator, are jointly implementing an Enterprise Development program. This program is part of the Coral South project Local Content Plan and aims to promote business opportunities and strengthen the capabilities of Mozambican Small and Medium Enterprises (SMEs) already established in the market, with high potential to growth, in order to make them more competitive and sustainable in the long term. The program is divided in phases, with the first one implemented between 2019 and 2020, counting with the participation of 121 Mozambican SMEs. The aim of this phase was to help participating companies enhance their services by improving their capabilities, while ensuring that they remain sustainable.

Phase 2 occurred from September to December 2021 with the iCreate Acceleration Program: for 12 weeks, 25 SMEs from phase 1, selected for their business model, potential for growth, organizational capacity and innovation, have strengthened their business capabilities.

During the COVID-19 pandemic, virtual training and live interactive workshops took place, including masterclasses delivered by industry experts on a wide range of topics such as Digital Marketing, Risk and Insurance, Access to Finance and Financial Capacity.

These trainings were finalized in December 2021 with a final ceremony of 10 December 2021.

Eni Rovuma Basin signed an agreement with the Institute for Promotion of Small and Medium Enterprises (IPEME) to support the creation of an online national SME database platform with the purpose of providing technical assistance and support entrepreneurs as well as create opportunities.

Area 4 also supports MozUP Enterprise Development Center (EDC) which helps build the capacity of Mozambican small-andmedium enterprises to qualify and compete in key Mozambican sectors of economic growth. Services include business assessments, consulting and advisory services, quality and safety certification requirements and information on accessing capital.



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## SUSTAINABILITY AND SOCIAL INVESTMENTS

The Coral South Project contributes to achieving the Sustainable Development Goals (SDGs) through Social projects implementation. SUSTAINABLE GOALS



#### Integrated Education Project (Pemba - Cabo Delgado)

The project aims to contribute for Paquitequete children to complete free, equitable, effective and quality primary education. So far two school, a multipurpose field and canteen were built and nutrition programs and extracurricular activities are being implemented reaching more than 5120 children; in addition 57 teachers benefited from training and about 400 adults with alphabetization coursers.



#### Energy Efficiency and Clean Cooking - Improved Cookstoves project (Pemba - Cabo Delgado)

The project is contributing to the reduction of the impact of Greenhouse Gas (GHG) emissions and deforestation and to improve the quality of life through local manufacturing and distribution of improved cook-stoves (ICS). So far 10.000 ICS manufactured and distrusted reaching equal number of families (about 50.000 People) and additional 10.000 ICS will be distributed in the upcoming 3 years reaching 20.000 families. The project also contributes to employment: 50 community members were involved in the ICSs production, logistics and distribution.

#### Community Development and Biodiversity Protection (Vamizi island - Cabo Delgado)

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The project aimed to contribute to increasing biodiversity conservation awareness in the coastal communities of Cabo Delgado regarding the importance of the marine resources for their livelihood. Main activities and results: Coral cultivation; 30 fishermen and 1 community fishing council trained; Capacity building for 2 women handicraft associations; Supply of laboratory equipment to UniLurio; Awareness campaign on biodiversity conservation awareness in the Vamizi community school.



#### Emergency response project - Cabo Delgado Internal Displaced People

The project goal is to contribute to providing life-sustaining assistance to Internally Displaced People (IDPs) and host communities living in Pemba, Metugi and Mecufi with food baskets (i.e. rice, oil, flower, beans etc) through Food For Work activities, with the provision of Non Food Items and logistics and planning support to the outreach clinics in. So far, the project benefitted about 20.000 people and more than 50.000 people indirectly.



Emergency response project - Covid-19 Emergency Support (Pemba)



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The goal was to support Covid 19 prevention through hygiene, by means of the installation of 30 water tanks, supply of water and soaps, awareness promotion on health and hygiene practices to prevent the pandemic. Also, the project focused on the education sector, by printing, distributing and correcting school worksheets for more than 3,500 Paquitequete primary school students, to ensure continuity in the learning process during school closure.

#### Vocational Training program (Pemba)

The project aims to support the training of young people in Pemba and Cabo Delgado in general for the job market as well as self-employment by strengthening the Commercial Institute of Pemba (IICP). So far a laboratory that will host automation, IT and electricity practical classes was built (in collaboration with Colleges and Institutes of Canada), an industrial kitchen was equipped to support the Hotel management and tourism courses, 90 teachers have been trained and certified and more than 460 scholarships were provided.

### COMMITMENT TO HEALTH, SAFETY AND ENVIRONMENT

Safe execution of all project activities and respect and care for the environment and surrounding communities is the number one priority. We consider people both as the starting point and the final goal of all our actions. This is why we work hard to ensure the safety of each of us and those around us, with a common and shared effort that contributes to the achievement of this project. At the base of everything is the consolidation of the safety culture and the dissemination of its essential value among employees and contractors.



We Care mindset and intervention promotion

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We believe that efficient execution and strong safety performance are directly linked. Joint actions have been taken to deliver a step change in Safety:

- → Enhancement of safety campaign initiatives
- → Enforcement of "Stop Work" Authority at all project levels

Campaigns focused on behavior:

- → Think before you act" to encourage all personnel to make safe choices
- $\rightarrow$  Recognition of positives behaviors and

incentive programs

→ Informal, regular senior management direct worker engagements in work settings (intervention and recognition)

The HSE Culture build during project execution and the high-level Commitment in constant improving of performances are testimony of actions taken and provide opportunity for a lasting legacy for Coral Sul FLNG operations and future projects in Mozambique.

Jointly developed with our contractor, the program is promoted through several initiates (i.e. weekly safety flyers, safety contest with prizes) and requires managementled discussions with supervisors and the workforce. Its results are visible for all to see. Standards set for construction onshore and offshore commissioning of Coral Sul FLNG represent a solid basis for the upcoming operation phase.





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